

Brewing in Early Australia

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Statement

This thesis is wholly the work of the candidate.

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Abstract

There is almost universal acceptance among historians that the consumption of alcohol in early colonial Australia was extraordinarily high by contemporary and modern standards. The consumption of vast amounts of imported alcohol, mostly spirits, so dominates the writing of early Australian history that there can be no place for beer as a significant item of consumption or, therefore, for brewing as a significant area of production. Chapter 1 provides the first accurate estimates of alcohol imports in Australia from 1800 to 1821 and the first careful comparison of alcohol consumption in the colony with contemporary Britain and modern Australia. Far from being one of the most drunken societies in history, early nineteenth century Australia drank significantly less than Britain at the time, and drank no more than late twentieth century Australia. Among the alcohol imported into the colony were significant amounts of beer, a reminder that beer not rum was the staple drink of Englishmen. If the colonists were quite normal in their intake of alcohol, might they not have been quite normal in demanding beer? And if so, is it plausible that no one had the energy and wit to supply that demand? The rest of this thesis deals with these questions by addressing a series of confusions about brewing in early Australia.

There has been a longstanding debate about when brewing began, including claims that it was virtually non-existent until the government established a brewery in 1804. Chapter 2 deals with brewing in the eighteenth century, and so answers the intrinsically interesting question of who was Australia's first brewer as well as introducing the reader to some of the problems and features of the industry into the nineteenth century. Chapter 3 examines the government's attempt to encourage beer consumption by establishing its own brewery. Its conspicuous failure in this venture has been taken as evidence of the limited demand for beer and the difficulties of producing beer on any scale in the colony. In fact, it simply illustrates the problems governments have in running

businesses. When the brewery was privately leased, it flourished. Chapter 4 is a detailed account of the far more successful efforts of commercial brewers from 1801 to 1821. Far from being an intermittent and unimportant rural activity, brewing by 1821 was a permanent and substantial industry which produced about 12 gallons of beer per head. This dwarfed beer imports of about a gallon per head and made colonial beer a major item of household consumption.

This level of output was the result of key developments in the business and practice of brewing. Chapter 5 shows how brewing in the 1810s was dominated by relatively large and specialised commercial brewers, located in Sydney, but distributing their beer widely by bulk sales to households and through public houses, many of which by 1821 were owned by the brewers themselves. A feature of brewing as a business is its modernity. Chapter 6 deals with the equally distinctive brewing practice which had developed in the colony. Problems in the supply of barley and difficulties with malting and brewing in a hot climate led to the widespread use of maize, to which brewers usually added cane sugar. The result was a colonial style of ale which answered technical problems of production, was cheap, and, to the irritation of critics, was popular with colonial drinkers. Chapter 7 tells of the deaths in the 1820s of the leading brewers, and of their replacement by a new generation. While the industry continued to develop in the 1820s, and would be transformed in the following decades, the scale and sophistication of brewing in 1830 was not greatly different from the state of affairs in 1821. It was the remarkable achievement of the first generation of brewers to have established a successful, permanent and thoroughly modern industry, while Macquarie was still governor, and the colonists had barely begun to move beyond the confines of the County of Cumberland and the thread of settlement from Launceston to Hobart. But no industry would have existed at all if there had not been a market for its product. The demand for beer, and the energy and innovation shown in meeting that demand, bring further into question the conventional picture of a people stupefied by alcohol.

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A Note on Weights, Measures and Currencies

The precise conversion of old weights and measures to the metric standard in use in Australia today is always clumsy and often misleading. Affairs in early colonial Australia were conducted in the weights and measures of the time. A drinker in a public house called for a quart pot, not for 1.1365225 of a litre. Households bought their beer by the gallon. Brewers bought their hops in pounds, pockets and bags. Everyone dealt in a range of measures which made up a complicated but coherent system.

The original weights and measures have been used throughout and are described in Appendix 2. Of particular importance, pre-imperial measures of volume were in use in Australia until 1 March 1833. Prior to then, there were two gallons in use: the wine gallon of 231 cubic inches, which was used for spirits and wine, and the ale gallon of 282 cubic inches, which was used for beer. The wine gallon is only five-sixths of the size of the imperial gallon of 277.42 cubic inches.

Prices throughout are in pounds, shillings and pence (£.s.d) or Spanish dollars (\$), which usually exchanged at the rate of 5s to the dollar (that is, at \$4 to the pound). Prices were shown in various ways in contemporary documents, for example: £5 4s 6d or £5.4.6 or 5l 4s 6d or 5.4.6; 4s 6d or 4/6. There are 12 pence to the shilling and 20 shillings to the pound.

Abbreviations of References

ADB	<i>Australian Dictionary of Biography.</i>
AJCP	Australian Joint Copying Project.
ANU	The Australian National University.
AONSW	Archives Office of New South Wales.
AOT	Archives Office of Tasmania.
BT	Bonwick Transcripts, ML.
CO	Colonial Office, PRO.
Col. Sec.	Papers of the New South Wales Colonial Secretary, AONSW.
HRA	<i>Historical Records of Australia</i> series I. References to series I are shown thus: HRA V, p. 357. The other series (III and IV) are identified as HRA ser. III and HRA ser. IV respectively.
HRNSW	<i>Historical Records of New South Wales.</i>
LTO	New South Wales Land Titles Office.
ML	Mitchell Library.
NLA	National Library of Australia.
PRO	Public Record Office.
SG	<i>Sydney Gazette.</i>

Details about these organisations, collections and publications are given in the bibliography.

Chapter 1

Alcohol Consumption in Early Australia

There is almost universal acceptance among Australian historians that alcohol consumption in the early decades of white settlement was extraordinarily high both by contemporary and modern standards. Russel Ward, in his book, *Australia*, is typical.

The general debauchery [in the early colony] was both sustained and aggravated by the oceanic tide of Bengal rum which was for many years the principal commodity imported. It was an age of prodigious drinking in which the prime minister, William Pitt the Younger, despite his formidable nightly intake of port, was said to have been seen drunk in the House of Commons only once: but the specially selected colonists at Sydney and Hobart Town outdrank all others.¹

In a revision of this work, the comparison was changed from the prime minister to the British people at large – ‘It was an age of prodigious drinking in which London gin-shops advertised that customers could get drunk for a penny and dead drunk for twopence’ – but the rest of the claim was maintained.² Britain was depicted as a heavy drinking society, but only to highlight the extraordinarily high alcohol consumption of the early colonists. In Ward’s best known work – *The Australian Legend* – colonial society had no equal in the history of the world. ‘To judge from contemporary accounts, no people on the face of the earth ever absorbed more alcohol per head of population.’³ It was presumably because he felt the point to be so obvious, and the evidence so overwhelming, that Ward did

¹*Australia*, Horwitz, Sydney, 1965, p. 26.

²*Australia Since the Coming of Man*, Lansdowne Press, Sydney, 1982, p. 47.

³*The Australian Legend*, Oxford University Press, Melbourne, 1958, p. 32.

not even bother to quote from contemporary accounts, choosing instead two observers from the late 1840s and early 1850s who attested to the continuing problem of drunkenness even at a time when, according to Ward, 'the oceanic tide of rum had long been ebbing'.

Thirty years later, Robert Hughes, in his best selling history of the convict system in Australia, described colonial Sydney as 'a drunken society, from top to bottom. Men and women drank with a desperate, addicted, quarrelsome single-mindedness. Every drop of their tippie had to be imported'.⁴

The most sought-after commodity of all was rum, a word which stood for spirits of all kinds – arrack, aguardiente, poteen, moonshine – but which meant, especially, imported liquor from Bengal. In this little community (less than 5,000 people in 1799; about 7,000 in 1805; just over 20,000 by 1817), nearly all of the men and most of the women were addicted to alcohol. In Australia, especially between 1790 and 1820, rum became an overriding social obsession. Families were wrecked by it, ambitions destroyed, an iron chain of dependency forged.⁵

Unlike Ward, Hughes drew on several sources to support his view, for the conventional story is not without foundation. A large part of the documentary evidence of early Australia is devoted to the problem of drink. In 1819, a leading British parliamentarian, Henry Grey Bennet, wrote that

The thirst after ardent spirits became a mania among the settlers: all the writers on the state of the colony, and all who have resided there, and have given testimony concerning it, describe this rage and passion for

⁴*The Fatal Shore*, Pan, London, 1988, p. 110.

⁵*Fatal Shore*, p. 290.

drunkenness as prevailing in all classes, and as being the principal foundation of all the crimes committed.⁶

While Bennett held that drunkenness prevailed in all classes, much of the documentary evidence deals with 'the lower orders': soldiers, convicts, and settlers, especially the emancipists.⁷ Hughes sounds a cautionary note on this very point, only to set it aside.

It may be that the reproofs of lower-class colonial boozing that came from the upper colonial crust should be treated with caution... If everyone had been drunk, the colony could not have survived. And yet there is little room for doubt about the hold rum had on the embryo society of New South Wales.⁸

But there is considerable room for doubt. While it is true that the body of contemporary opinion held that alcohol consumption was high, and pervasive in its damage, the verdict was not unanimous. Writing in 1820, a colonial clergyman, John Cross, felt 'that very many of the colonists are both sober and industrious, and I beg leave to say that I do think in a great measure the character of the colonists in this respect has been unjustly reproached'.⁹ Moreover, systematic inquiry in our own time often shows that long and widely held views are incorrect, or, at the very least, have no strong foundation in evidence. At the heart of the problem is the fact that observers can be wrong, either deliberately or

⁶*Letter to Viscount Sidmouth, Secretary of State for the Home Department, on the State of the Hulks, and of the Colonies in New South Wales*, Ridgway, London, 1819, p. 78.

⁷See, for example, Hunter to Portland, 25 July 1798, HRA II, p. 169; King to Hobart, 9 November 1802, HRA III, p. 652; Bligh to Windham, 7 February 1807, HRA VI, p. 124.

⁸*Fatal Shore*, p. 291.

⁹Cross was replying to Lachlan Macquarie's 'Queries submitted for Answers to the Magistrates and Clergymen of New South Wales', which was distributed on 15 January 1820, and is No. 2, Appendix A of House of Commons, *Report and a Letter relating to the State of the Colony*, Parliamentary Papers, 1828 (477), Vol. XXI, p. 538.

unintentionally. This is particularly the case when individuals move from commenting on their own private affairs to questions of public policy.

Accusations of drunkenness or rum profiteering were convenient weapons for pursuing political or personal campaigns. Even where there is not self-interested or malicious intent, observers often notice and record remarkable behaviour, and ignore the commonplace.

The claim that a society drinks heavily properly rests on the statistical evidence of alcohol consumption compared with the evidence for comparable societies or against some reasonably objective standard of safe alcohol consumption. Quantification is sometimes dismissed as 'vulgar', but in dealing with a matter such as the average alcohol consumption of a society, it is necessary to know how much was drunk and by how many. The heart of such an assessment for early colonial Australia is the level of alcohol imports. For every writer who has dealt with alcohol, it is the oceanic tides of rum which are the heart of the drink problem. Data on imports have rarely been used by historians. On the few occasions that historians have attempted to quantify imports, mistakes in the evidence assembled or faulty methods have tainted the results.

Previous Attempts at Estimating Alcohol Consumption

Attempts to quantify the inflow of alcohol began with Philip Gidley King. In obedience to instructions received from the Duke of Portland, Governor Hunter began keeping records of all shipping entering and clearing Port Jackson, and their cargoes, from 3 November 1799.¹⁰ The more zealous King took very seriously his instructions to deal with the unrestrained importation of alcohol. He began assembling accounts of the spirits and wine brought into the colony from the shipping records while still Lieutenant-Governor.¹¹ Upon taking command of

¹⁰Hunter to Portland, 20 September 1800, HRA II, pp. 570-1.

¹¹King to Portland, 18 September 1800, HRA II, pp. 542-50. This covered the period from 3

the colony on 28 September 1800, King began a policy of sending away cargoes of spirits and wine, notably those brought by American ships. His accounts for 28 September 1800 to 31 December 1804 listed the gallons of spirits and wine 'imported', 'landed', and 'sent away', by ship and for various reporting periods.¹² By 'gallons imported', King meant 'gallons brought to the colony'. It was equal to gallons landed plus gallons sent away. There are some relatively minor mistakes in these accounts. The spirits imported and landed from the *Perseus* are each 140 gallons in the accounts, but were 240 gallons in the inward shipping returns from which the accounts were taken.¹³ For the modern reader, the great fault with the accounts lies in King's failure to put the figures into context. King's purpose was mainly to show the extent to which he was restricting the landing of spirits, not to provide evidence that the unrestrained trade in spirits and wine led to an extraordinary or unacceptable level of consumption, or that his policy had resulted in a normal or acceptable level of consumption. King had no doubt about the colonists' thirst for alcohol or the success of his policy, and so let the figures speak for themselves. But data in this raw state tell us very little.

Frederick Watson provided an early analysis of these figures in his introduction to volume three of *Historical Records of Australia*. He reports that in the 25 months between September 1800 and October 1802, 69,880 gallons of spirits were landed, and 37,691 gallons were sent away. The respective figures for wine were 33,246 and 22,932 gallons. The population was 5,807 'so King permitted the landing of sufficient spirits and wine to permit the consumption of

November 1799 to 31 May 1800.

¹²These are in HRA III, pp. 131, 454-5, 593-4; HRA IV, p. 528; HRA V, p. 264. King tried other means to dissuade traders from sending cargoes. At his request the Secretary of State had directed the Governor General of India not to allow speculative cargoes to be sent to the colony and asked the American government to inform merchants in Boston and Rhode Island of the prohibition (Brian H. Fletcher, *Landed Enterprise and Penal Society*, Sydney University Press, 1976, p. 103; Proclamation, 28 May 1804, HRA V, 84-5).

¹³HRA III, pp. 593, 642. There is a mistake in transcription which has confused some modern historians. The totals for spirits imported and landed are both wrong in HRA III, p. 594 (compare HRA III, p. 131). Only the landed figure was corrected in HRA V, p. 264.

an average per annum of 3.876 gallons of spirits, and .889 gallons of wine by each man, woman, and child'.¹⁴

There are a number of errors in Watson's presentation. He refers to page 594 of volume three, but must mean the table on page 593, which covers the 24 (not 25) months from 28 September 1800 to 30 September 1802. The quantity of spirits sent away was actually 37,891 gallons. The figures he gives for 'gallons landed' of spirits and wine are in fact for 'gallons imported', that is, brought to the colony but not necessarily landed. He also makes a small mistake in addition and transcription: 69,980 gallons of spirits were imported, not 69,880 gallons. The presentation is very messy although it seems that he did use the right figures – quantities landed – in arriving at his figures for average consumption. The exact figures for per annum consumption using the table on page 593 and Watson's population estimate are 3.872 gallons of spirits and 0.888 gallons of wine.

There are also fundamental problems with Watson's analysis of the figures. To put the alcohol consumption of the colonists into context he rightly compares the figures with alcohol consumption in his own time. He refers to the *Commonwealth Year Book* for average consumption figures in Australia in 1912 of 0.85 gallons of spirits and 0.5 gallons of wine. The comparison is hardly a just one. According to Watson, 'The non-consumption of beer, which was not available to the colonists, is known to have little effect on these figures'. Much of this thesis is concerned to show that imported and especially locally made beer were major items of consumption. Nevertheless, in 1800-2 beer consumption was still relatively small and would not have affected the average consumption of pure alcohol given beer's relatively low alcohol content. But this was not so for Australia in 1912, which was a beer drinking society, with average consumption of 13.2 gallons.¹⁵

¹⁴HRA III, p. xvi.

¹⁵Commonwealth Bureau of Census and Statistics, *Official Year Book of the Commonwealth of Australia 1914* (No. 7), Commonwealth Bureau of Census and Statistics, Melbourne, 1914, p. 803.

There are other mistakes in Watson's comparison, most notably, the fact that the gallon in 1800 was only five-sixths of the size of the imperial gallon in use in 1912, a point taken up in detail below. Important demographic differences between the two societies are also ignored. In 1800, 82.2 per cent of the population were adults.¹⁶ In the 1911 census, adults were only 68.4 per cent of the population.¹⁷ Adults drink much more than children, and children in 1912 almost certainly drank less than children in 1800, when small beer was still a common part of the British child's diet and wine was frequently prescribed by doctors. The masculinity of the population is also important. In 1800, 72 per cent of the population were males. In 1912, the figure was 52 per cent. On average, men drink more than women and women in 1912 were almost certainly more abstemious than their sisters in 1800. To summarise, in 1800 a larger proportion of the population were in the prime drinking group (men) and alcohol consumption was higher among the two groups which consumed less or no alcohol (women and children). Making some assumptions about alcohol strengths in the early 1800s and 1912, discussed below, annual per head consumption of pure alcohol was 9.5 litres for the period examined by Watson and 5.0 litres in 1912. Adjusting for demographic differences reduces this gap considerably. Annual per adult consumption figures were 11.6 litres and 7.3 litres respectively.

This still leaves some difference between the two periods, but there is one final point. The figure for 1912 is typical for early twentieth century Australia. The figure for 1800-2 is atypical for early colonial Australia. Watson's object was to argue that King's 'efforts did not produce any permanent change for the better' in the flow of spirits into the colony, 'and it is doubtful if they produced a temporary improvement'. Watson was right to think that King's policies had little effect, but he is in error in saying that the level of imports per head in the early

¹⁶Figures compiled by J. C. Caldwell in Wray Vamplew (ed.), *Australians: Historical Statistics*, Fairfax, Syme & Weldon Associates, Sydney, 1987, p. 25. A child is generally under 15. This figure is an average of three figures for 1800 to 1802.

¹⁷Commonwealth Bureau of Census and Statistics, *Year Book 1914*, p. 92. A child is under 15.

years of King's administration was typical of the early colonial period. Table 1.1 shows that alcohol imports in 1800 were abnormally high, at about 19 litres of pure alcohol per head. This was undoubtedly higher than in previous years and was halved in 1801. The average annual figure for 1800–21 was about 8.6 litres (see Table 1.2). The brief surge in imports in 1800 was not the result of a sudden mania for consumption, but rather of a considerable increase in the number of traders operating in the market. Chief among these was Robert Campbell, of the Indian trading house, Campbell, Clarke and Co., who had arrived in Sydney in June 1798. In February 1800, Campbell imported over 13,000 gallons of spirits in his company's ship, the *Hunter*. Other ships brought cargoes ranging from a few hundred gallons of spirits to over 9,000 gallons. As well as British ships there were American vessels and the odd Spanish prize ship.¹⁸ This high level of imports soon glutted the market.¹⁹ One response was to re-export part of the accumulating stock of spirits. The brig *John* arrived on 2 June 1801 with 8,000 gallons of spirits and 360 gallons of wine. Refused permission to land the spirits, it sailed on 25 July for Amboyna with 10,850 gallons of rum, apparently having picked up an unsold quantity of spirits from a local trader.²⁰ King's action of refusing permission to some ships' captains to land spirits and wine at this time no doubt reduced total imports of alcohol but the main reason for imports falling to about 2.5 litres of pure alcohol per head in 1802 was commercial sense not regulation.

The period examined by Watson includes the tail-end of a year of extraordinarily high imports (1800), an above average year (1801), and part of a well below average year (1802). These add up to a higher per head figure than the average for 1800–21 of 8.6 litres of pure alcohol. (Using the longer period makes

¹⁸J. S. Cumpston, *Shipping Arrivals and Departures, Sydney, 1788–1825*, Roebuck, Canberra, 1977, pp. 32–7; HRA II, *passim*.

¹⁹D. R. Hainsworth, *The Sydney Traders: Simeon Lord and His Contemporaries 1788–1821*, Cassell, Melbourne, 1972, pp. 1–43.

²⁰HRA III, pp. 128, 131, 453.

less of a difference for per adult consumption because the proportion of children in New South Wales rose from 18.7 per cent in 1800 to 24.1 per cent in 1819.) Per head consumption of 8.6 litres is still higher than the 1912 figure of 5.0 litres but it hardly conveys the same impression as Watson's chief comparison of 3.876 gallons of spirits consumed in 1800-2 with 0.85 gallons consumed in 1912.

In 1966 A. G. L. Shaw used King's figures and Watson's workings in addressing the question of alcohol consumption. His conclusions occur in a discussion of the convicts, but deal with the whole population.

Outside their work, the men had little to solace them but drink. They took to the new world the love of alcohol they had in the old, where drunkenness was rife in the cities, and where, and per head of population, about half a gallon of spirits and one and a half gallons of beer were consumed every year. But in New South Wales, men were better off financially, and had little else to spend their money on. They had little or no family life, which some thought might check their bibulousness, or at least provide an alternative source of interest and affection. They mixed, perforce, with men whose tastes were like their own. Per head of population they drank more than three gallons of spirits a year, six times as much as in England, though compared with it there was little beer, and the proportion of adult males in the population was larger.²¹

Shaw rightly acknowledges the importance of beer in British alcohol consumption, and the higher proportion of adult males in the colonial population. But like Watson, Shaw is too unsystematic and his analysis quickly falls apart. The figures for 'the old world' are curious. In 1801, the 10.5 million people of Great Britain drank 5.6 million gallons of domestically produced spirits which gives Shaw's rough figure of about half a gallon per head. (Shaw speaks of

²¹*Convicts and the Colonies*, Melbourne University Press, 1966, p. 72.

England, for which the average consumption is somewhat lower. The 8.9 million people of England and Wales drank 4.1 million gallons of spirits.) But the British drank 6.4 million barrels of beer, of which 4.7 million barrels were classed as strong beer. Consumption per head was about 22 gallons, not a gallon and a half, to which must be added a similar quantity of home brewed beer, albeit of a lower alcoholic strength, five-sixths of a gallon of wine and two-fifths of a gallons of imported spirits (see Table 1.3). British alcohol consumption per head was about eight times higher than suggested by Shaw's figures. Even without accounting for the demographic differences between the two societies, the higher alcohol consumption in Australia identified by Shaw disappears completely when British alcohol consumption is estimated more accurately. As an aside, a comparison with consumption in Shaw's own Australia of the mid-1960s would have revealed even less reason to think the colonists such heavy drinkers. Per head consumption of pure alcohol had risen from 5.0 litres in 1912 to 6.9 litres in 1965-6.²²

Both Watson and Shaw used data for a very short and rather atypical period, and made mistakes in comparing their results with modern Australia and contemporary Britain. A wider range of sources and a longer period, and a more careful comparison, were required to quantify and make sense of early Australian alcohol consumption. In the late 1970s A. E. Dingle made the first concerted attempt at this task. As Dingle noted, it was surprising that this had never been done before.²³ For early colonial Australia, Dingle uses King's accounts for 1800-1804; the Naval Officer's returns for 26 January 1808 to 8 January 1809 (which are presented as for the year 1809);²⁴ a Return of Spirits Imported into Sydney for 1811-20;²⁵ and the duties paid figures in the Blue Books for 1822-9.²⁶

²²A. E. Dingle, "'The truly magnificent thirst': an historical survey of Australian drinking habits", *Historical Studies*, vol. 19, no. 75, October 1980, p. 246.

²³Dingle, 'Magnificent thirst', pp. 227-49. See also A. E. Dingle, *Drink and Drinking in Nineteenth Century Australia: A Statistical Commentary*, Monash Papers in Economic History, No. 6, Department of Economic History, Monash University, 1978.

²⁴Dingle does not provide a reference for Thomas Jamison's returns which are to be found at HRA VI, pp. 643-4 and HRA VII, p. 12. These returns were prepared during the rebel administrations of George Johnston (26 January to 28 July 1808) and Joseph Foveaux (29 July

The data series which Dingle produces has some problems. There is one mistake in transcription: the figure given for duties on spirits in 1829 of 238,418 is the import figure for beer for that year.²⁷ More generally, the series does not include wine and beer imports. Finally, there are gaps for eight years for the period 1800-29. Nevertheless, Dingle's figures were the first concerted attempt at getting a consistent series for spirits imports, to which he adds some more general estimates of wine and beer consumption. He concludes that 'after allowance has been made for the fragmentary nature of the evidence, it is clear that early colonists [to 1830] drank more than their countrymen who remained behind in Britain'. More generally, the 'nation was founded by heavy drinkers'.²⁸ But the workings by which Dingle arrives at these conclusions do not go far enough. While recognising the usefulness of converting the data to a standard measure of alcohol content such as litres of pure alcohol, he deals only in the volume of alcohol by type, that is, spirits, wine and beer. Similarly, he also recognises the importance of demographic differences in making comparisons but does not give any estimates to show how important this is. There is no clearly worked out comparison between colonial Australia and contemporary Britain, which would show that with the figures he has there is no great difference between the two societies. He also shies away from making a comparison between colonial and modern Australia, which would show the same thing.

1808 to 8 January 1809). In the war of words which followed his deposition, Governor Bligh reported on 30 June 1808 that 12,650 gallons of spirits and 48,170 gallons of wine had been imported since 26 January 1808 (HRA VI, p. 534). It is impossible to form a firm opinion on the truth. The 'official' figures of Jamison seem very low, although later reports indicate that spirits stocks in the colony were very low by early 1809. The last administrator during the interregnum, William Paterson, commented on the dearth of spirits on 23 March 1809 and proposed to the master of the *Admiral Gambier* that he bring 10,000 gallons into the colony (HRA VII, p. 31). Bligh's figures seem high, and there must be doubts about their authenticity. The figures in Table 1.1 for 1808 are those issued by Jamison plus the cargo of the *City of Edinburgh*, which was the only ship to arrive from overseas in January 1808.

²⁵This is taken from Fletcher, *Landed Enterprise*, p. 238. The Return was prepared by the Naval Officer on 31 December 1820 and is to be found in the Appendix to Commissioner Bigge's Report, PRO, CO 201/129, Document K17 (AJCP 117).

²⁶PRO, CO 206/63 to CO 206/70 (AJCP 1169-70).

²⁷Dingle, 'Magnificent thirst', p. 245; compare Dingle, *Drink and Drinking*, pp. 6, 12.

²⁸Dingle, 'Magnificent thirst', pp. 241, 244.

In 1983 N. G. Butlin provided the first sustained questioning of the conventional view of heavy alcohol consumption in early Australia.²⁹ Butlin made clear the need for assembling the available data, and converting them to a meaningful standard, in order to compare colonial Australia with contemporary Britain and modern Australia. For 1800-04 he used King's accounts, and for 1811-20 he used the Naval Officer's report summarised in Fletcher, and some of the Shipping Returns printed in *Historical Records of Australia*. From this material he produced consumption figures per head of population and per adult male. He also made a number of important points on the treatment of smuggling, illicit and legal production, and the alcoholic strength of different liquors. But unfortunately, Butlin's article is chaotic, limited in scope and, in some parts, wildly inaccurate. For 1814, for example, he reports 1,206 gallons of imported wine, when the real figure was over 16,000 gallons. The figures for imported beer are poorly assembled. Wherever unfamiliar or inconvenient measures were used by the Naval Officer, they appear to have been ignored or called hogsheads. Some amounts appear simply to have been missed, such as in 1814 when a number of cargoes including one of 179 hogsheads of porter were overlooked. The conversions to a standard measure of alcoholic content are also poorly done. Nevertheless, Butlin does reach the conclusion that alcohol consumption in early colonial Australia was not heavy compared with contemporary Britain or modern Australia.

Despite the novelty of Butlin's argument, it received little notice. Those with a medical interest in alcohol, such as Powell and Lewis, took up Butlin's article, along with other evidence, to conclude that the colonists' reputation for extraordinary drinking was a myth.³⁰ John Ritchie – a prominent historian –

²⁹'Yo, Ho, Ho and How Many Bottles of Rum?', *Australian Economic History Review*, vol. XXIII, no. 1, March 1983, pp. 1-27.

³⁰Keith Powell, *Drinking and Alcohol in Colonial Australia 1788-1901 for the Eastern Colonies*, National Campaign Against Drug Abuse, Monograph No. 3, Australian Government Publishing Service, Canberra, 1988; Milton Lewis, *A Rum State: Alcohol and State Policy in Australia 1788-1988*, Australian Government Publishing Service, Canberra, 1992.

acknowledged and drew upon Butlin's article.³¹ In the main, however, Butlin was ignored. In one case, his article was cited in a conventional description of the high alcohol consumption of the colony, but no reference was made to its central point that the available evidence does not support the conventional view.³² Butlin's presentation is only partly to blame. The real difficulty is in questioning such an established and central part of Australian historiography. There remains a great need for a detailed examination of alcohol consumption in early Australia, an outline of which is given here.

A New Estimate of Alcohol Consumption

Imports, and, in particular, spirits imports, clearly provided the larger part of the pure alcohol consumed in the colony. Until the end of 1799, reasonably accurate figures for imports cannot be given because of the absence of official shipping returns. W. S. Campbell's figures for spirits and wine imports from 1788 to mid-1800 of 26,974 gallons and 8,896 gallons, which Butlin uncritically uses, are a complete nonsense, being in fact the figures from King's account for 28 September 1800 to 31 December 1801.³³ Nevertheless, it is possible to make some broad generalisations about consumption.

The first fleet arrived with at least 115 pipes of rum and 15 pipes of wine bought at Rio de Janeiro, together with various private cargoes of spirits, wine and beer brought by the officers, including Governor Phillip, and whatever remained of the customary quantities of alcohol allowed sailors at sea.³⁴ The spirits and wine bought in Rio were for the garrison of marines and the hospital

³¹John Ritchie (ed.), *A Charge of Mutiny*, National Library of Australia, Canberra, 1988, p. xvi.

³²Ross Fitzgerald and Mark Hearn, *Bligh, Macarthur and the Rum Rebellion*, Kangaroo Press, Sydney, 1988, pp. 44-6.

³³Walter S. Campbell, 'The Use and Abuse of Stimulants in the Early Days of Settlement in New South Wales', *Journal and Proceedings of the Royal Australian Historical Society*, vol. XVIII, 1933, p. 95; Butlin, 'Yo, Ho, Ho', p. 5.

³⁴Phillip to Nepean, 2 September 1787, HRNSW I, pt 2, pp. 112-3; James Bonwick, *First Twenty Years of Australia*, Sampson, Low, Marston, Searle and Rivington, London, 1882, p. 6.

respectively. After the landing in late January 1788, there was little contact with the rest of the world for several years. The *Sirius*, despatched from the colony on 2 October 1788 to get further supplies returned from the Cape of Good Hope on 6 May 1789 with 127,000 pounds of flour for the settlement 'and a twelvemonth's provisions for her ship's company' which probably included the usual spirits ration.³⁵ The *Lady Juliana*, *Justinian* and the three ships of the second fleet arrived in June 1790, taking the population of the colony to over 2,000. They carried a small amount of wine. The *Justinian* also had on board 30 hogsheads and 30 barrels of spirits for the use of the *Sirius*.³⁶ In September 1790, the *Supply* returned from Batavia with flour and four months supply of spirits for its crew.³⁷

The 14,490 gallons of rum brought on the first fleet for the 206 men of the garrison were to last three years at the usual ration of half a pint a day, but the stock was depleted in about two and a half years. On 24 July 1790, Phillip wrote to Nepean that 'At present there are not any spirits in the settlement, to continue which for three years a promise was made to the marines when they were embarked; nor will there be any for the officers of the Civil Department until sent out'.³⁸ Part of the explanation for the shortfall is theft, six marines having been executed in early 1790 for removing provisions, including spirits, from the stores over several months.³⁹ Some of the allowance made to marines and sailors no doubt found its way to the 760 or so adult convicts but the consumption of alcohol in these first years was very uneven. The service personnel and the sailors of the *Sirius* and *Supply* received their rations of half a pint of spirits a day – a considerable amount in anyone's terms – while the convicts received next to nothing. The small establishment of twenty officials presumably made do with what they brought in their own cargoes. Norfolk Island was in a similar position

³⁵David Collins, *Account of the English Colony in New South Wales* [Cadell and Davies, London, 1798, p. 66] Facsimile edition, Libraries Board of South Australia, 1971.

³⁶HRA I, p. 222.

³⁷HRA I, p. 173.

³⁸HRA I, p. 202.

³⁹Phillip to Sydney, 12 February 1790, HRA I, p. 144.

to Sydney. On 11 February 1791 there were only 85 gallons of spirits in the store and the military establishment of 79 had not been issued 'a drop of spirits' since 29 May 1790.⁴⁰ The 472 adult convicts would have had very little to drink.

Available records suggest that the dearth of spirits continued in 1791 and into 1792, while the third fleet arriving in 1791 took the population to nearly 2,900. The colony was not only short of grog, it was short of food, with the ration of flour and other items reduced and real concerns existing about starvation.⁴¹ In the second half of 1792 several ships arrived from Britain and America carrying spirits, wine and beer. The chief source for shipping arrivals at this time is David Collins, who records that the *Royal Admiral* which arrived from England on 7 October 1792 carried spirits and a large quantity of porter for sale. Two American ships followed with speculative cargoes. The *Philadelphia* carried rum, gin and wine, and the *Hope* sold 7,597 gallons of 'new American' spirits, presumably New England rum.⁴² Around this time 9,278 gallons arrived for government use, 'being the allowance of half a gallon for each person per annum' including the convicts.

From 1792 onwards, alcohol arrived with greater frequency in cargoes of varying amounts, the largest being about 5,000 gallons.⁴³ Population also increased, and exceeded 5,000 in 1799. Alcohol consumption became much more widespread as commercial importation and sale increased. In particular, the great majority of the population – the convicts – became a larger part of the market for alcohol. It is therefore likely that average alcohol consumption increased from 1792 to 1799.

With the introduction by Hunter of a register of shipping and cargo movements in November 1799, the flow of imports becomes quantifiable. Most of the (usually quarterly) reports for 1800 to 1815 are in *Historical Records of*

⁴⁰Lieutenant-Governor Ross to Governor Phillip, 11 February 1791, HRA I, pp. 232, 246.

⁴¹Phillip to Grenville, 15 December 1791, HRA I, p. 323.

⁴²Collins [1798, pp. 240-5, 254-5].

⁴³This was on the *Halcyon*, which arrived on 14 June 1794 (Collins [1798, p. 374]).

Australia. This series states that most of the reports for 1816 to 1818 are lost, and does not include reports from 1819 onwards.⁴⁴ A considerable part of these gaps can be filled from records available at the Archives Office of New South Wales. This material takes the record through to 1821, and provides details for 1823 and half of 1822 and 1824. The Blue Books provide information from 1822 onwards, to which can be added various other records including consolidated accounts prepared from time to time and Thomas Jamison's return for 1808. This information is brought together and converted into litres of pure alcohol per head in Table 1.1 to give a single figure for the importation of pure alcohol per head of population for each year from 1800 to 1834 excluding 1805, 1809 and 1830. The steps taken in assembling these figures warrant explanation.

Imports of alcohol were recorded either in gallons or in hogsheads, barrels and the various other measures then in use. As pointed out already, the gallon in early colonial Australia was smaller than the imperial gallon, which was brought into use, along with the other new imperial weights and measures on 1 March 1833.⁴⁵ The imperial gallon was 277.42 cubic inches. Until 1833, there were two gallons in use: the wine gallon of 231 cubic inches which was also used for spirits, and the ale gallon of 282 cubic inches. The ale gallon is roughly the same as the imperial gallon but the wine gallon is almost exactly five-sixths of the imperial gallon. All figures in Table 1.1 up to but not including 1833 have been adjusted accordingly.

The conversion of cargoes expressed in other liquid measures is not so easy. Tuns, pipes, butts, puncheons, hogsheads, tierces and barrels were standardised measures, but they differed in size. Wine gallon measures were different to ale gallon measures and ale gallon measures were different for ale and 'beer', the latter term including porter, which was the main type of beer imported

⁴⁴HRA IX, p. 374; HRA X, pp. 99-100.

⁴⁵Blue Book, 1832, PRO, CO 206/72, p. 180 (AJCP 1170). The American Revolution meant that the United States retained the old standard, with the wine gallon eventually applying to all liquids including beer.

into Australia. So a tun of wine was 252 wine gallons, a tun of beer was 216 ale gallons and a tun of ale was 192 ale gallons. The relationships between different measures were largely the same. For example, there were four hogsheads to the tun in all three cases. The exception was the barrel: there were eight wine barrels to the tun but only six ale or beer barrels to the tun (see Appendix 2).

It is not surprising that these terms were sometimes used inexactly, but generally, where these measures can be checked against other records expressed in gallons, the terms are applied accurately. Puncheons are the one exception, with some being a good deal larger than the standard size of 84 wine gallons. Usage in the West Indies rum trade had long been for a larger cask of about 100 to 110 gallons.⁴⁶ Other measures such as a cask did not have a precise definition. Bottles were variously sized, and hampers, chests and packs convey only the vaguest of meaning. Less common measures appear. A leager (or leaguer) was a measure roughly equal to a pipe and used particularly for arrack. These measures are not common and other sources provide guidance in many cases as to their size.

To convert gallons of imports into litres of pure alcohol requires making assumptions about the strength of the various types of alcohol coming into the colony. The strengths assumed here are: spirits (60 per cent alcohol by volume), wine (20 per cent) and beer (7.5 per cent). Until about 1820 there is little evidence to indicate the strength of alcohol. By reputation, the spirits coming into the colony were fiery drops. Transport costs and the levying of local duties by volume rather than strength certainly favoured the importation of highly alcoholic liquors, and there is no doubt that a substantial part of the spirits imported was well above 60 per cent. But much of the spirits imported was below 60 per cent, in particular, gin and brandy, which were significant parts of the total volume of spirits. This is

⁴⁶Frank Wesley Pitman, *The Development of the British West Indies 1700-1763* [1917] Frank Cass and Company, London, 1967, p. 423; Richard B. Sheridan, *Sugar and Slavery: An Economic History of the British West Indies 1623-1775*, Johns Hopkins University Press, Baltimore, 1973, p. 342.

confirmed by the records in the 1820s which include alcoholic strengths in Sikes proof (also known as British or London Hydrometer Proof). Sikes proof (100°) was 57.1 per cent alcohol by volume. In a shipping order for 1823, 28 per cent overproof rum (73 per cent alcohol by volume) is found with 3 per cent underproof brandy (55 per cent) and 1 per cent underproof gin (56 per cent).⁴⁷ On 15 January 1825, a government order established the maximum strength of spirits which could be imported into the country as seven per cent overproof on the Sikes scale, or 61 per cent alcohol by volume.⁴⁸

Ullage was an important factor in reducing the alcohol content of liquor coming into the colony. American legislation on the bonding of spirits in force until 1942 allowed for the loss through evaporation and leakage of four proof-gallons in a 40 gallon cask in a ten-month period.⁴⁹ The significance of expressing this allowance in proof-gallons rather than simply in gallons is that some of the loss of spirits is replaced by moisture from outside the cask. In the damp conditions of a five month sea voyage and the often hot and humid conditions of many months in the bond store in Sydney, a significant reduction in the alcohol content of spirits could take place. The figure of 60 per cent alcohol by volume used here is felt to be an accurate average for spirits brought into the colony. It is above the 40 per cent standard of most modern spirits and Butlin's assumption of 50 per cent used in his article.⁵⁰

The assumed alcohol content of wine of 20 per cent treats all wine as fortified wine even though some of the imports were table wines, in particular, claret. There was some white wine, and even champagne, imported. These wines would be in the range of 10-14 per cent. Nevertheless, most of the wine imported was port, madeira and sherry, at about 20 per cent, although some of the lighter

⁴⁷HRA XI, p. 635.

⁴⁸HRA XI, p. 492.

⁴⁹Tun Yuan Hu, *The Liquor Tax in the United States 1791-1947*, Columbia University, New York, p. 116.

⁵⁰'Yo, Ho, Ho', p. 9.

fortifieds might have been only about 15 per cent. Small quantities of perry and cider have been included in the wine figures. Beer is assumed to be 7.5 per cent, which is higher than a typical Australian lager of 5 per cent. Strong beer at the time was higher in alcohol than a typical beer today, and most of the beer sent to Australia was strong beer, for reasons discussed below. The effects of the journey and storage on alcohol content which have been noted for spirits may have been offset for beer by the common practice of secondary fermentation in the barrel during the voyage. The figure of 7.5 per cent is the alcohol content of Guinness's legendary Foreign Extra Stout, a beer which is expressly brewed for export to hot places.

The estimated importation of pure alcohol is then divided by the population. A number of historians and demographers have produced population figures for early Australia. The figures for the total population used here are estimates produced by the Commonwealth Bureau of Census and Statistics.⁵¹ This series has the great virtue of providing estimates for every year, whereas most other series gather figures from government musters, and leave gaps where information is not available. The Bureau's series is fairly conservative and therefore produces higher per head consumption figures.⁵²

The whole population, including the military garrison and, most importantly, the convicts, has been included. Most convicts were not imprisoned and enjoyed considerable opportunity to consume alcohol. The population figures include all of the settlements on the mainland, Norfolk Island and, until 1812, Tasmania, as there was considerable movement of alcohol and people between Sydney and the other settlements. Norfolk was settled in 1788 after the main settlement at Sydney. In the first half of the 1790s, more than a quarter of the total

⁵¹*Demography* 1946 (Bulletin No. 64), Commonwealth Government Printer, Canberra, 1948, p. 155.

⁵²Compare Frank Lewis, *The Cost of Convict Transportation: Britain to Australia, 1796-1810*, Working Papers in Economic History, No. 81, Department of Economic History, Research School of Social Sciences, Australian National University, p. 34; Vamplew, *Historical Statistics*, pp. 25, 104.

population of the colony lived on the island. This proportion declined in the early 1800s before the island was abandoned in 1813. It was resettled in the mid-1820s with a small population of about 100. Quite regular traffic between the island by traders such as Boston and Co. and others ensured that liquor reached the island although this seems to have been available in smaller quantities per head and at higher prices.⁵³ Direct shipments to Norfolk were generally prohibited, a rule largely though not always observed.⁵⁴ The best modern population series gives figures for the mainland settlement up to 1807 which are roughly equal to the total population figures in *Demography 1946*.⁵⁵ A few direct shipments of alcohol to Norfolk would be greatly outweighed by the apparent undercounting of the island's population.

Generally speaking, Norfolk was a drier place than the mainland settlements of Sydney, Parramatta and Windsor. The same applies to the small coastal settlement at Newcastle, 150 kilometres to the north of Sydney, which had a population of 133 in 1805.⁵⁶ The population of Van Diemen's Land (modern Tasmania) has been included from its settlement in 1803 until 1812. In June 1813, Tasmanian ports were opened to commercial vessels, and Tasmanians were increasingly supplied from direct imports going through their own Naval Officer. Until 1813 most goods were directed through Sydney and were recorded in the Sydney Naval Officer's accounts. Some cargoes came directly from overseas,

⁵³Boston and Co. built two vessels which operated to Norfolk from 1797 to 1800. The second was built following the loss of the first through mutiny (T. F. Palmer to Reverend John Disney, 14 August 1797, and Palmer to J. T. Rutt, 10 September 1799, Papers Relating to Scotch Martyrs, ML, BT 38, 374-89). Maurice Margarot, c. 1800, reported that Palmer's rum sold for £3 a gallon on Norfolk when the price in Sydney was 32s (Maurice Margarot's Journal, excerpted and commented upon, in Copies of Portions of Two Scrapbooks of G. W. Rusden's in Trinity College, Melbourne, ML, B1374, p. 33).

⁵⁴The only known incident involved John Boston, the former partner of Boston and Co. who landed a quantity of spirits from the *Union* in 1804 (SG, 28 October 1804). Governor King directed that henceforth there was to be no intercourse with with any vessel unless it was in distress or carrying a letter from the Governor (P. G. King to officer commanding Norfolk Island, 6 January 1805, ML, MSS A2015, p. 471).

⁵⁵The modern series is the table prepared by J. C. Caldwell in Vamplew, *Historical Statistics*, p. 25.

⁵⁶Result of General Muster, 1-5 August 1805, HRA V, p. 613.

such as in 1809 when the *Hibernia* arrived from Calcutta and the *Hunter* arrived from Bengal. The *Hunter* unloaded 252 cattle while the *Hibernia* carried a speculative cargo, although most, perhaps all, of this went to Sydney.⁵⁷ After 1813 there are relatively small shipments of alcohol going from Sydney to Hobart which have been accounted for.

There are two important groups which have been left out. The place of aborigines cannot be determined. Anecdotal evidence shows that drink was a part of the relationship between black and white. Bennilong, the best known aborigine in the colony, has been widely judged to have been an alcoholic.⁵⁸ Assistant Chaplain, Richard Hill, thought that drunkenness was the prevailing vice in the colony, 'even among the aborigines'.⁵⁹ Nevertheless, it seems unlikely that total aboriginal consumption would greatly reduce average white consumption. Far more important is the consumption of visiting sailors, both in port, and in purchases taken on board prior to leaving. The purchases of visitors is generally unaccounted for in modern estimates of alcohol consumption by country. In the case of modern Australia, the consumption of visitors to Australia would be reasonably close to the consumption of Australians abroad. This was certainly not the case in early colonial Australia. Sydney was a port town, and sailors must have constituted an important part of the publican's trade. The sale of spirits, wine and beer to departing vessels for the use of the crew would also have been large. Against this, sailors arriving in port may have sold some of their private stores of liquor, but this would have been small compared with consumption onshore and the victualling of outgoing ships.

⁵⁷Statistical Tables Tasmania 1804-23 inclusive, in Australian Bureau of Statistics, *Colonial Statistics 1804-1901*, microfilm; I. H. Nicholson, *Shipping Arrivals and Departures, Tasmania, 1803-1833*, Roebuck Books, Canberra, 1983, p. 25; Cumpston, *Shipping*, p. 67.

⁵⁸He saw out his days in the employ of James Squire, the central figure in the early brewing industry. Bennilong was buried on Squire's property close by the hop field and brewery.

⁵⁹In Hill's reply to Lachlan Macquarie's 'Queries submitted for Answers to the Magistrates and Clergymen of New South Wales', which was distributed on 15 January 1820, and is No. 2, Appendix A of House of Commons, *Report and a Letter relating to the State of the Colony*, Parliamentary Papers, 1828 (477), Vol. XXI, p. 538.

Imports vary greatly from year to year. This may offer some insights into economic and trading conditions. Particular features of the spirits figures include the glut in 1800, the peaks in 1811 and 1815-16 associated with the beginning of the hospital contract monopoly and the first years of free trade following its cessation, and the general increase in alcohol consumption per head in the late 1820s which continued into the 1830s.⁶⁰ Consumption, however, was rather more stable than the import figures suggest. Most imports of alcohol went into the bond store and were released over many months or even years, and merchants, retailers and customers in turn kept stores of liquor.

Table 1.2 gives the average annual imports of pure alcohol for 1800-21 per head, per adult and per male, and compares them with Great Britain in 1801, an unremarkable year for British alcohol consumption; with Australia in 1976-7, the peak year for alcohol consumption per head in the twentieth century; and with Australia in 1991-2, after 15 years of falling average alcohol consumption. These figures do not support the generally held view that the alcohol intake of early colonial Australians was extraordinarily high. The colonists consumed 8.6 litres of imported pure alcohol per person per year in 1800-21. Interestingly, annual imports of pure alcohol per head were 14.8 litres in 1825-34, when 'the oceanic tides of rum' are generally thought to have been receding. (The average figure for 1800-34 is 10.1 litres.) Imported alcohol consumption per head in 1800-21 was lower than total legal alcohol consumption per head in Great Britain in 1801 (12.8 litres) and in Australia in 1976-7 (9.8 litres), but was somewhat higher than consumption in 1991-2 (7.8 litres). Taking into account demographic differences reinforces the point that alcohol consumption in early colonial Australia was significantly lower than in contemporary Britain and was broadly in line with Australia in recent decades. This second comparison is all the more remarkable

⁶⁰Under the contract for the construction of the hospital, Macquarie had granted Simeon Lord, D'Arcy Wentworth and Garnham Blaxcell the sole right to import liquor for three years (1811-13). This was subsequently extended to include 1814 (Marion Phillips, *A Colonial Autocracy: New South Wales Under Governor Macquarie 1810-1821* [P. S. King and Son, London, 1909] Reprinted, Sydney University Press, 1971, pp. 90-4).

when it is realised that modern Australia has relatively moderate alcohol consumption compared with other developed countries.⁶¹

Average consumption in early Australia was not only unremarkable by comparison with other societies, it was also moderate against more objective standards for safe drinking as determined by modern health authorities. White Australian adults were drinking about 30 millilitres of imported pure alcohol a day in 1800-21. This is roughly two standard drinks: two mids of full strength beer, or two glasses of table wine, or two nips of spirits.⁶² A general view on the upper limit for safe alcohol consumption among health authorities has been the so-called 4+2 rule: four standard drinks a day for men and two for women. Average colonial consumption was well within these limits. Further, a wave of recent scientific research has established the numerous health benefits of moderate drinking over both intemperance and abstinence.⁶³ Average colonial consumption was not just safe – it was optimal. This conclusion must be qualified by recognising that the pattern of consumption included harmful episodes of binge drinking and a range of consumption levels from teetotalism, through moderation, to alcoholism. In this, as in the average level of consumption, colonial society was probably not greatly different to modern Australia.

These results are not altered by consideration of other sources of alcohol or other drugs. Legal distilling did not begin in Australia until 1824, when 6,285 gallons of spirits were made from sugar in Sydney. This rose to 12,235 gallons in 1825, and then to 34,585 gallons in 1826, before falling to 8,494 in 1827 and ceasing in 1828 because of a prohibition on distilling from sugar, high grain

⁶¹ 'Temperate Aussies leading the world', *The Canberra Times*, 17 January 1994.

⁶² A standard drink is defined as 10 grams or about 12 millilitres of pure alcohol. A midi is a half-pint.

⁶³ Understandably, this research has been widely reported. See, for example, the following recent articles in *The Canberra Times* of research from Australia, Britain and Denmark: 'Bottle of wine a day keeps the Grim Reaper away: study' (6 May 1995); 'In England they say "drink and be merry"' (14 December 1995); 'Beer good for you, brewers' study shows' (12 June 1996); 'Moderate drinkers live longer: researcher' (23 January 1997); 'Ale and hearty veterans thrive on grog' (7 June 1997).

prices, and low prices for imported spirits. The peak year of consumption was 1826 when duty was paid on 17,469 gallons. The local spirits were 7 per cent above London Hydrometer proof, in line with the maximum proof for imported spirits.⁶⁴ The consumption figure for 1826 was therefore 40,338 litres of pure alcohol, or one litre per head. Wine production was insignificant in the early decades of settlement. Cider, in particular, that made from peaches, was more widely made but was not important enough to alter consumption figures. As this thesis shows, the only important source of alcohol in early Australia was commercial brewing, which added perhaps two and a half litres to annual pure alcohol consumption per head by 1821, and less than two litres per year for the period 1800 to 1821. Home brewing was a very minor practice in the colony (see Chapter 5). Legal production in early Australia is far more significant than the legal production which has been left out of the alcohol consumption figures for modern Australia (essentially, home brewing), and probably more significant than the legal production of cider and fruit wines which have been left out of the British consumption figure for 1801. Commercial brewing in the colony does raise average alcohol consumption, but not by enough to alter the conclusions drawn from comparisons with Britain and Australia or against modern health standards. Interestingly, the high beer output from the end of the 1810s coincided with a period of greatly reduced imports of pure alcohol per head. These averaged 6.6 litres for the eight years from 1818 to 1825.

Smuggling and illicit distilling do not greatly alter average alcohol consumption in early Australia either. There were obvious motives for smuggling: the avoidance of duties and landing charges and the circumvention of government prohibitions especially during Governor King's administration and the four years of Macquarie's hospital contract. But there were also problems for the would-be smuggler. A voyage to Sydney with a cargo of rum was not like crossing the English Channel with a load of French brandy. The job could not be done

⁶⁴Blue Books, 1825 to 1828, PRO, CO 206/65 to 206/69 (AJCP 1169-70).

overnight. It was difficult to organise with accomplices on shore to receive the consignment. And landing places away from Port Jackson, while admirable in their isolation, were damnable in their inaccessibility. Certainly, some smuggling occurred, with the Hawkesbury the main scene of the crime, although, as Butlin notes, much of this was actually the illegal movement within the colony of liquor which had been legally imported.⁶⁵ It is difficult to imagine that smuggling into the colony occurred on a significant scale.

Similar reservations apply to illicit distilling. There were considerable difficulties in producing spirits illegally on a large scale. Metallurgical skills in the colony were limited and would-be distillers had to rely largely on imported equipment which was both expensive and easily detected. The main factor against illicit distilling was the absence of a legal distilling industry. Most of the illicit distilling in Britain was done on legal premises when excise officers were absent. The extent of this practice was revealed in the 1820s when a large cut in the excise duty and a vigorous campaign against illicit distilling saw legal output in England rise by 33 per cent and in Scotland by 132 per cent.⁶⁶ Illicit production in Britain in 1801 may have been half of legal output. As with distilling, policing of illegal brewing by excise officers was less effective outside London, particularly in regard to the many brewing victuallers (or pub brewers) and smaller common brewers.⁶⁷ Again, the point is that illicit brewing was conducted on legal premises. There was no reason for this to occur in New South Wales as no duty whatsoever was levied on materials used or beer produced. Illegal production in early Australia should not be overstated and was certainly less important than in contemporary Britain. In modern Australia, smuggling of alcohol and illicit distilling are very minor activities, but other drug use is probably more significant

⁶⁵Yo, Ho, Ho', p. 21.

⁶⁶B. R. Mitchell and P. Deane, *Abstract of British Historical Statistics*, Cambridge University Press, 1962, pp. 244, 257.

⁶⁷Peter Mathias, *The Brewing Industry in England 1700-1830*, Cambridge University Press, 1959, pp. 341-4.

in its effects than smuggling and distilling were in early Australia. Opiates were in use in British and colonial society, and even the Polynesian intoxicant, kava, is known to have been imported, but their use in New South Wales was insignificant.⁶⁸

To summarise, even if smuggling and legal and illegal production are extravagantly estimated to have been half of legal imports, this would only raise average consumption to three standard drinks a day – well within safe limits. If these other factors are taken into account for all three societies, the conclusion would stand that the colonists consumed far less alcohol than their contemporaries at home and no more alcohol and other drugs than their descendants today. A large part of the early history of Australia needs re-examining.

Beer and Brewing

The observation that alcohol consumption in early Australia was unremarkable goes to the very heart of the writing of Australian history and is a necessary starting point for an examination of the brewing industry in Australia. The trade in and consumption of imported spirits so dominates the writing of early Australian history that there can be no place for beer as a significant item of consumption or, therefore, for brewing as a significant area of production. ‘Colonial Australia showed little interest in beer or ale’, Robert Hughes tells us succinctly, and that is the end of the matter.⁶⁹ Fletcher less dogmatically writes of ‘the limited demand for beer in a community where more potent drinks were preferred’.⁷⁰ Even Butlin, in questioning the conventional view of high alcohol consumption, argues that early Australians ‘unlike their modern successors, were reluctant to accept beer as

⁶⁸For the kava, see Richard Aitkins, *Voyage to Botany Bay (Journal 1787-1810)*, Transcript copy, NLA, FRM NK 1523, p. 198.

⁶⁹*Fatal Shore*, p. 291.

⁷⁰*Landed Enterprise*, p. 204.

a source of alcohol, despite early official attempts to encourage its consumption. For once, the public sector was the better predictor of eventual preferences'.⁷¹

As Table 1.1 shows, the range of imported alcohol was more diverse than many writers have appreciated, with the volume of wine and beer exceeding the volume of spirits in half the years. The range of drink imported and the quality of products offered is shown in an 1805 advertisement from noted trader Simeon Lord. 'To be sold by Private Contract, To such Persons as receive Permits, Porter in Casks, Brown Stout in bottles, Burton, Welch, and Wiltshire Ales in bottles, Wine in casks and bottles, A small quantity of Jamaica Rum and Cogniac Brandy.'⁷² The range only widened with time. This was not a society without taste. Although expensive, the *Gazette* reported, 'The Porter brought by the Argo is universally praised for its quality'.⁷³ The existence of a large beer trade sits oddly with the conventional view of a society craving oblivion through alcohol. Why would anyone bother with such an expensive way of getting drunk? It also runs counter to many historians' knowledge of beer as a commodity. Helen Pearce writes, with evident surprise, that 'there are records of beer and porter being shipped to New South Wales', despite being 'liable to spoil on a long voyage which included some time in the tropics without the benefit of refrigeration'.⁷⁴

The exporting of British beer was well developed by the time the colony of New South Wales was established. In 1800, 90,654 barrels of British beer – some 3.3 million gallons – were exported (excluding Ireland). The Baltic trade had developed considerably during the second half of the eighteenth century, in part due to the cheap freight available on ships carrying bulky goods such as timber and iron from the Baltic returning under ballast. Napoleon Bonaparte caused a temporary disruption to the trade in the early nineteenth century, which became

⁷¹'Yo, Ho, Ho', p. 2.

⁷²SG, 16 June 1805.

⁷³SG, 30 June 1805.

⁷⁴*The Hop Industry in Australia*, Melbourne University Press, 1976, p. 13.

permanent in the 1820s when the Russians and Swedes introduced high tariffs to protect new domestic porter breweries at St Petersburg and Gothenburg. Trade to North America was the larger part of exports until the mid-eighteenth century and continued to be a significant though relatively less important market well into the nineteenth century. Exports were not limited to temperate and cold climates. In 1800, the West Indies accounted for half of all exports, while the Indian trade had reached 9,000 barrels. In the nineteenth century, India would become the single largest market for British beer.⁷⁵ The trade to New South Wales was initially an insignificant part of total British beer exports. In 1802, about 150 barrels came to New South Wales. By the late 1820s, the Australian market was one eighth of exports. But even in the earliest years, beer was a significant item in the colony's imports.

This trade was dominated by porter, a dark, highly hopped, vatted beer related to dry stout. While its origins are shrouded in some mystery, in the late eighteenth and early nineteenth centuries it was the most popular style of beer in England, produced in huge quantities at the massive London breweries which were regarded as one of the industrial marvels of the age. Porter triumphed because it was suitable to 'mass-production at contemporary standards of control', unlike the conventional English ales of the time.⁷⁶ The practice of porter brewing also made it a suitable beer for export, especially to hot, distant markets like New South Wales. It had a high hop rate and alcohol content, both of which assisted in improving its keeping qualities. The high alcohol content came from the combination of high density (a large amount of fermentable material went into it) and its lengthy fermentation (almost all of the sugars were converted into alcohol). The higher alcohol content added to the bitterness of the hops by removing the residual sugars that imparted some sweetness in conventional

⁷⁵Mathias, *Brewing Industry*, chapter VI.

⁷⁶Mathias, *Brewing Industry*, p. 13. The theme of Mathias's monumental study is the rise of porter.

British ales. The darkness of porter, from the addition of highly roasted malts, also added to its bitterness. Lengthy maturation in large vats, in some cases, for a year or more added further to its stability. An alternative technique for achieving a similar result was to prime the cask for secondary fermentation on the long voyage. Porter was made at different strengths, the strongest or 'stoutest' giving rise to the use of the term 'stout' which has continued to this day (the term is a lot older than stout as we know it, and once simply meant the strongest beer in a brewer's range). The relationship between porter and stout is shown in the decision of the Guinness proprietors in 1810 'to try whether the publicans will encourage a stouter kind of porter'.⁷⁷ These qualities were most noticeable in the porters meant for export. Porter was the beer in which the colony was toasted on 26 January 1788, and it was the first beer brought for commercial sale in 1792.⁷⁸ It dominated the beer trade to New South Wales throughout the period under examination here.

While the importation of beer is notable, it was greatly exceeded by local production. This has also been largely ignored because of the general acceptance among historians that early Australia was a desperately drunken place. If the colonists made anything alcoholic, it would have been 'the hard stuff', because that was what the market demanded. Brewing was necessarily an inconsequential or retarded activity in early Australia. Indeed, for some of those historians who have cared to give it their attention, the brewing industry was still underdeveloped in the mid-nineteenth century. An entry for 1838 from the bicentennial history, *Australians*, illustrates well this general view.

Beer brewing in the colonies was very much in its infancy. Most beer was made at home for household use. Tooth's brewery had been established in

⁷⁷Patrick Lynch and John Vaizey, *Guinness's Brewery in the Irish Economy, 1759-1876*, Cambridge University Press, 1960, p. 151.

⁷⁸See Chapter 2 for the former and Collins [1798, p. 240] for the latter.

Sydney only in 1835, and hops were still imported from Britain. No reliable high-quality beer could be produced locally – though it was said that some of Perth’s breweries made “an article not at all to be despised”. Public houses were largely supplied from England.⁷⁹

R. H. Fagan’s entry on the brewing industry in the *Australian Encyclopaedia* similarly discounts the early decades of the industry. The first brewery was established only in 1804 ‘in an attempt by the colonial government to reduce the alarming consumption of rum’.

Between 1820 and 1850 many breweries were established but survived only briefly, partly as a result of the slow growth of a market for beer, and because of technical problems in adapting brewing methods brought from the northern hemisphere to the quite different conditions in Australia.⁸⁰

Other writers have corrected this view to a considerable extent. Walsh argues that in the 1820s large, sophisticated and permanent breweries began, which saw colonial beer taking precedence over imported porter by the end of the decade. Problems remained, notably in the handling of malting in a hot climate which saw considerable use of sugar, but this was overcome by the 1840s.⁸¹ Dingle follows Walsh’s story.⁸² The evidence clearly supports Walsh and Dingle’s view that brewing was not still in its infancy in the mid-nineteenth century. One account for 1826 describes 13 breweries in New South Wales

⁷⁹Frank Broeze, ‘Consumer Goods’, in Alan Atkinson and Marian Aveling (eds), *Australians 1838*, Fairfax, Syme & Weldon Associates, Sydney, 1987, p. 169.

⁸⁰*Australian Encyclopaedia*, Grolier, Sydney, 1983, vol. 2, p. 79.

⁸¹G. P. Walsh, A History of Manufacturing in Sydney, 1788-1850, Unpublished Master of Arts thesis, ANU, 1969, pp. 89-90, 93. See also G. P. Walsh, ‘The geography of manufacturing in Sydney, 1788-1851’, *Business Archives and History*, vol. 3, pt 1, 1963, pp. 24, 39-42; and G. P. Walsh, ‘Manufacturing’, in G. J. Abbott and N. B. Nairn (eds), *Economic Growth of Australia 1788-1821*, Melbourne University Press, 1969, pp. 252-4.

⁸²Dingle, *Drink and Drinking*, pp. 9-10. Fletcher’s description of the industry in 1821 fits with this general view, see *Landed Enterprise*, p. 204.

producing 8,000 hogsheads of 'wholesome' beer per year.⁸³ This gives per head consumption of 10.8 gallons. *The Australian* of 16 July 1828 put average monthly production of six Sydney breweries at 465 hogsheads, or 7.3 gallons per head per year, but this did not include country brewers and at least two Sydney breweries: Mackie and Dickson's, whose output *The Australian* thought would be 'very considerable', and the Albion, which had only just come on stream in May but was to become Sydney's biggest brewery in the 1830s. Annual per head consumption of local beer in New South Wales in the mid-1820s was about 11 gallons, the figure around which Australian beer consumption would range from about 1890 until the end of the second world war.⁸⁴ In Tasmania, seven breweries in 1829 provided for a population of slightly less than half the size of New South Wales.⁸⁵ Quality is a very subjective matter, but by the 1830s, criticism of the whole industry on the grounds of quality is sounding very thin. Not only did Newnham and Tooth begin brewing in 1835, but in 1832 another famous name, consistently associated with quality to this day, was established in Tasmania: Cascade Brewery. There were brief imported beer booms in the late 1820s and late 1830s.⁸⁶ However, these do not alter the point that brewing was a significant and successful industry in the 1820s and 1830s.

But the view of Walsh and Dingle does not go far enough. In their accounts, the successes of brewing in the 1820s are contrasted with the halting and limited progress made prior to 1821. Walsh documents a number of early brewers in the 1790s and 1800s, to conclude that by '1810 the brewing industry was established, if not very firmly, and beer production increased from this year onwards'. Brewing had been hampered by the irregular supply of grain and the demand for spirits. As it was 'an industry that was specially designed to reduce

⁸³Peter Cunningham, *Two Years in New South Wales* [Henry Colburn, London, 1827, vol. 2, p. 74] Facsimile edition, Libraries Board of South Australia, Adelaide, 1966.

⁸⁴Dingle, *Drink and Drinking*, p. 34, Appendix (Table A1).

⁸⁵R. M. Hartwell, *The Economic Development of Van Diemen's Land 1820-1850*, Melbourne University Press, 1954, p. 145.

⁸⁶Dingle, *Drink and Drinking*, p. 12.

the consumption of spirits', conditions were particularly 'inauspicious' during the rebellion years of 1808-9. 'This was because the governing elite, the officer-trader monopolists, profited greatly by the importation and retailing of spirits.'

Conditions improved for brewing in the Macquarie years (1810-21), although government regulation proved a new burden and technical difficulties, especially with malting, remained. Walsh's conclusion is that in 1821 breweries were still small in scale, intermittent in operation and 'tied closely to the rural framework'.⁸⁷

Dingle endorses Walsh's view. 'Until the 1820s colonial beer was neither popular nor widely consumed' due to technical difficulties in production and variations in the price of inputs and imported beer. 'Given the problems faced by brewers and importers in earlier years, beer consumption before 1828 and 1829 is likely to have been at significantly lower levels' than the 11 to 12 gallons per head of local and imported beer consumed annually in the late 1820s.⁸⁸ Similarly, Butlin acknowledges local brewing before the 1820s but doubted that 'production was sustained at over 1000 gallons a week' during 1811-15.⁸⁹ Pearce provides considerable detail about the development of brewing prior to the 1820s, but the general tone is that the various successes in these earliest decades showed the promise which bore fruit when the industry expanded rapidly in the 1820s and 1830s.⁹⁰ Brewers were lacking in expertise, suffered from problems of supply, and produced poor quality stuff which could not compete with imported porter. Above all of these problems in production, and of competition from imported beer, was the lack of demand for beer in general in an alcoholic society.

This thesis argues that brewing was not an insubstantial activity in its infancy in 1821, but a successful, permanent and remarkably modern industry.

⁸⁷Walsh, *History of Manufacturing*, ANU, pp. 24-30.

⁸⁸Dingle, *Drink and Drinking*, p. 9. Fletcher's description of the industry in 1821 fits with this view, see *Landed Enterprise*, p. 204.

⁸⁹Butlin, 'Yo, Ho, Ho', p. 11.

⁹⁰*Hop Industry*, pp. 1-22.

Developments in the 1820s were a continuation of already established practices, rather than a period of transformation from the old to the new. From the very beginning most Australian beer was produced by commercial brewers rather than home brewers. Commercial brewing in turn was increasingly dominated by common brewers who sold through retailers or in bulk to households. By the mid-1810s the brewing victualler, producing in small quantities for sale over the counter, was a minor part of the industry, unlike in Britain, where brewing victuallers still accounted for a third of commercial output in the 1820s. These major brewers were concentrated in Sydney and the nearby settlement of Ryde, but their sales were not restricted to this part of the market. Cheap transport gave them access to the other major centres of Parramatta, Liverpool and even the furthest afield town of Windsor, fifty-six kilometres to the north-west of Sydney. Brewing in 1821 was already dominated by a small number of relatively large specialist businesses, achieving economies of scale in production, and distributing their beer well beyond their immediate locality. As part of this development, all of the major brewers had by 1821 acquired a number of their own retail premises.

Certainly, there were difficulties in securing the basic ingredients of malt and hops, and in brewing and distributing beer in a hot climate. But these problems were overcome through the industry and innovation of commercial brewers, and the standard of local beer undoubtedly rose, along with the quantity produced. Hops were mainly imported from Great Britain, but had been grown locally for commercial use since 1806. By the mid-1810s successful growers in Sydney were producing several tons a year; in Van Diemen's Land a far more successful hop industry was being established by the late 1810s. More to the point, the lack of self-sufficiency in the supply of raw materials tells us nothing about whether the brewing industry was successful or not. By 1820, brewers had access to a steady and sufficient supply of imported hops, to which was added colonial production. With regard to grain for malting, barley had proven to be difficult to use for various reasons. Brewers had responded by using maize which

was cheap and more easily handled during malting and brewing. The use of sugar during brewing had also become commonplace. This had been a technical response to the problems of brewing with maize and in the heat, but it also contributed to a distinctive style of colonial ale. By contrast with porter, which was bitter, highly hopped and well-matured, colonial ale was sweet, less well-hopped, and served fresh. Understandably, this style had its critics, but it must be understood as a necessary compromise if the brewers were to produce cheaply and on a large scale. Intriguingly, and infuriatingly for the critics, the colonial style had also become popular among drinkers.

As a result of these developments in the business and practice of brewing, local beer production had reached about 12 gallons per head by 1821. The consumption of imported beer was only about one gallon per head. Cheap, readily available colonial beer had an important place in daily life and was a significant item in household expenditure. At the heart of this achievement was the colonists' traditional English demand for a tasty, refreshing and less alcoholic drink. The story of early brewing is, therefore, a part of the argument advanced in this chapter that the early colonists led far more sober and normal lives than is usually claimed. The demand for beer, and the energy and innovation shown in meeting this demand, cast further doubt on the notion of a people stupefied by alcohol.

Table 1.1: Alcohol Imports into New South Wales, 1800-1834 (gallons)

Year	Spirits	Wine	Beer	Population	L/h
1800	41,916	5,883	n.a.	5,217	19.1
1801	24,227	11,722	n.a.	5,945	10.7
1802	5,525	4,278	5,551	7,014	2.5
1803	14,512	4,860	11,232	7,238	5.6
1804	26,222	11,688	4,536	7,598	9.2
1805	n.a.	n.a.	n.a.	7,707	n.a.
1806	11,366	5,209	15,696	7,910	4.4
1807	12,488	11,656	3,816	8,794	4.4
1808	8,538	19,140	n.a.	10,263	3.3
1809	n.a.	n.a.	n.a.	11,560	n.a.
1810	33,675	6,658	17,154	11,566	7.6
1811	82,147	21,487	14,616	11,875	17.5
1812	16,207	55,494	11,397	12,630	6.6
1813	39,452	4,956	29,502	12,157	8.5
1814	11,493	16,101	16,050	12,183	3.6
1815	80,341	10,721	62,663	13,116	16.2
1816	109,666	9,796	9,244	15,518	16.7
1817	56,909	20,612	23,034	17,848	8.6
1818	23,754	2,834	14,339	22,438	2.7
1819	83,774	7,362	31,109	26,059	7.9
1820	129,354	9,014	21,071	28,024	11.0
1821	69,374	34,926	37,492	29,665	6.6
1822	67,921	25,657	66,150	29,680	6.6
1823	69,840	53,802	n.a.	30,623	6.5
1824	64,800	25,609	n.a.	35,769	4.7

1825	102,960	n.a.	56,250	38,313	6.6
1826	71,200	163,021	78,165	38,890	8.0
1827	181,859	82,424	81,315	39,467	12.8
1828	339,978	197,360	194,750	40,069	24.7
1829	294,198	227,987	238,418	40,916	22.6
1830	n.a.	n.a.	n.a.	44,588	n.a.
1831	130,936	79,257	76,067	48,000	8.0
1832	373,599	164,128	244,490	53,524	19.8
1833	204,095	67,006	198,193	62,112	11.0
1834	382,741	239,235	213,119	66,068	20.2

Notes

n.a. not available

For 1800 to 1832, spirits and wine imports are in wine gallons, and beer imports are in ale gallons. For 1833-4, all imports are in imperial gallons.

Population includes Tasmania up to and including 1812.

L/h is litres of pure alcohol per head of population.

Sources

HRA II, pp. 550, 571-2; III, pp. 131, 452-4, 593-4, 637-42; IV, pp. 365-6, 525-8; V, pp. 120-1, 262-4, 767-9; VI, pp. 113, 192-4, 618, 643-4; VII, pp. 12, 320-1, 426-34, 644-9, 761, 766; VIII, pp. 193, 198, 201, 588, 591; IX, pp. 76, 81, 86.

Naval Officer Quarterly Reports, 1810-24, AONSW, Col. Sec. x698-x701 (6023).

Blue Books, 1822-34, PRO, CO 206/63 to 206/74 (AJCP 1169-1170).

D. R. Hainsworth, 'Trade within the Colony', in G. J. Abbott and N. B. Nairn (eds), *Economic Growth of Australia 1788-1821*, Melbourne University Press, 1969, p. 275.

Commonwealth Bureau of Census and Statistics, *Demography 1946*, p. 155.

Conversion of gallons to litres of pure alcohol for 1800-32

Spirits: wine gallons x 0.8326724 x 4.54609 x 0.6

Wine: wine gallons x 0.8326724 x 4.54609 x 0.2

Beer: ale gallons x 1.0165092 x 4.54609 x 0.075

Conversion of gallons to litres of pure alcohol for 1833-4

Spirits: imperial gallons x 4.54609 x 0.6

Wine: imperial gallons x 4.54609 x 0.2

Beer: imperial gallons x 4.54609 x 0.075

Table 1.2: Comparing Alcohol Consumption (litres of pure alcohol per year)

Place and year	Per head	Per adult	Per male (men and boys)
Australia 1800-21	8.6	11.0	12.4
Great Britain 1801	12.8	21.0	26.9
Australia 1976-7	9.8	13.4	19.5
Australia 1991-2	7.8	10.0	15.7

Sources

Alcohol consumption per head: Tables 1.1 and 1.3; K. W. Clements, 'Taxation of Alcohol in Australia', in J. G. Head (ed.), *Taxation Issues of the 1980s*, Australian Tax Research Foundation, Sydney, 1983, p. 366 (the figure for 1976-7 assumes average strengths of 40 per cent alcohol by volume for spirits, 12.5 per cent for wine and 5 per cent for beer); Australian Bureau of Statistics, *Apparent Consumption of Selected Foodstuffs Australia Preliminary 1996-97*, Australian Bureau of Statistics, Canberra, 1997.

Population figures for per adult consumption: Children under 15 years were 15 to 19 per cent of the population of New South Wales, including Norfolk Island, in 1800, and 24 to 26 per cent by 1819 (Vamplew, *Historical Statistics*, pp. 25, 104). It is assumed that 22 per cent of the population were children during the period 1800-21. The 1821 Census for Great Britain had a partial return to a question on ages. Of the 12,488,000 people covered by the respondents, 39 per cent were under 15 (Mitchell and Deane, *Historical Statistics*, p. 11). A similar proportion of children has been assumed for the 1,604,000 people who were not covered by the respondents, and the figure of 39 per cent has been applied to Great Britain in 1801. In Australia in 1976, children under 15 were 27.1 per cent of the population (Commonwealth Bureau of Statistics, *Year Book Australia 1979* (No. 63), Commonwealth of Australia, Canberra, 1979, p. 82). The figure for 1991 was

21.9 per cent (Australian Bureau of Statistics, *Year Book Australia 1994* (No. 76), Australian Bureau of Statistics, Canberra, 1994, p. 120).

Masculinity for per male consumption: Estimates of masculinity for 1800, 1805, 1810, 1815 and 1820 are given in Commonwealth Bureau of Census and Statistics, *Year Book 1914*, p. 89. These give an average of 69.1 per cent of the population. British masculinity of 47.6 per cent is from Mitchell and Deane, *Historical Statistics*, p. 6. Australian masculinity for 1976 of 50.2 per cent is from Commonwealth Bureau of Statistics, *Year Book Australia 1979*, p. 82. In 1991 it was 49.8 per cent (Australian Bureau of Statistics, *Year Book 1994*, p. 120).

Table 1.3: Legal Alcohol Consumption in Great Britain in 1801

Type of alcohol	Gallons	Litres of pure alcohol
Domestic spirits	5,631,000	12,789,364
Imported spirits	4,299,000	9,764,070
Imported wine	8,788,246	6,653,411
Commercial beer	226,916,000	62,916,666
Home brew	226,916,000	41,944,444
Total		134,067,955
Population		10,501,000
Per alcohol consumption per head		12.8 litres

Notes

Great Britain is England, Wales and Scotland.

Spirits and wine are in wine gallons. Beer is in ale gallons.

Sources

British Spirits Charged with Duty for Consumption (potable spirits consumed in each kingdom), Mitchell and Deane, *Historical Statistics*, p. 256.

House of Commons, *An Account of the Number of Gallons of Foreign Spirits 1787-1819*, Parliamentary Papers, 1820 (220), Vol. XII, p. 204.

House of Commons, *Second Report (Relative to the Silk and Wine Trade) from the Select Committee of the House of Lords, appointed to inquire into the Means of extending and securing the Foreign Trade of the Country*, Parliamentary Papers, 1821 (703), Vol. VII, p. 420. This report has both imports and re-exports.

About 98 per cent of the wine imported into Britain was from Portugal, Spain, Madeira and the Canaries, most of which was fortified wine: port, madeira, sherry

and so on. The assumption of an average strength of 20 per cent alcohol by volume is reasonable.

Beer Charged with Duty – England, Wales and Scotland, Mitchell and Deane, *Historical Statistics*, p. 252; Beer exports from England, 1800, Mathias, *Brewing Industry*, p. 172. Three quarters of the beer produced commercially was strong beer. Given high gravities, thorough mashing and secondary fermentation, an average strength for strong beer of 7 per cent alcohol by volume is quite reasonable, as is an average strength of 3 per cent for small and table beer. This gives a weighted average of 6 per cent for all commercial beer. An average barrel size of 34 gallons has been assumed (see Appendix 2).

Private brewing by institutions and individuals was not recorded in the excise figures but accounted for about half of all malt made into beer from 1790 to 1809 (Mathias, *Brewing Industry*, pp. 372-7). This seems a very high figure, but Mathias confidently reports it as applying into the 1820s. A lower figure is suggested by an estimate that private brewing produced around one-fifth of beer consumed in 1830 (T. R. Gourvish and R. G. Wilson, *The British Brewing Industry 1830-1980*, Cambridge University Press, 1994, p. 25). Home brewers probably extracted less from the grain than commercial brewers, especially the large London porter breweries. They have been assumed to produce the same quantity of beer but at a weaker average strength of 4 per cent.

Population from Mitchell and Deane, *Historical Statistics*, pp. 6-7.

Conversion of gallons to litres of pure alcohol

Spirits: wine gallons x 0.8326724 x 4.54609 x 0.6

Wine: wine gallons x 0.8326724 x 4.54609 x 0.2

Commercial beer: ale gallons x 1.0165092 x 4.54609 x 0.06

Home brew: ale gallons x 1.0165092 x 4.54609 x 0.04

Chapter 2

Australia's First Brewers: 1788-1800

Beer and brewing arrived with the first fleet. The landing at Sydney Cove on 26 January 1788 was celebrated with a beer.

At day light the Marines & Convicts were landed from the *Supply* & the latter began clearing away a piece of ground to erect the tents on, after noon the Union Jack was hoisted on shore & the Marines being drawn up under it, the Governor & officers to the right & the Convicts to the left, Their Majesties & the Prince of Wales, with success to the Colony was drank in four Glasses of Porter, after which a feu-de-joie was fired & the whole gave three Cheers, which ceremony was also observed on board the *Supply*.⁹¹

Earlier still, a simpler and quieter ceremony had taken place. The first ship of the fleet to arrive at Botany Bay, the *Supply*, had anchored at the opening of the bay at a quarter past two on 18 January, 1788. Three more ships arrived the next morning, and a party, including Governor Phillip, Major Ross and lieutenants Ball, Dawes, King and Long, set off in three boats at eleven in the morning to examine the bay. Sometime around three o'clock, on 19 January, a Saturday, the party landed, probably in present day Sandringham or Sans Souci. There, according to King, they ate 'salt beef and, in a glass of porter, drank the healths of our friends in England'.⁹²

⁹¹Philip Gidley King, *Journal*, ML, C115, p. 136. This copy of King's journal was written up by him a few years after he had written the original journal, which is called *Remarks and Journal* (ML, Safe 1/16). The reference to porter is not in the original journal, which omits a number of details to be found in the later copy. HRNSW II reproduces the first journal (the passage is on p. 543), as does P. G. Fidlon and R. J. Ryan (eds), *The Journal of Philip Gidley King: Lieutenant, R.N. 1787-1790*, Australian Documents Library, Sydney, 1980 (the passage is on p. 36).

⁹²King's *Journal*, HRNSW II, p. 540.

Brewing too had come with the first fleet. Following successful experimentation during Captain Cook's Pacific expedition of 1772-3, malt essence was commonly supplied on British ships as an antiscorbutic. It could be brewed on board or when the crew went ashore for provisions, and was flavoured either with hops or spruce essence. We know that spruce beer was made during the voyage of the first fleet and afterwards on shore.⁹³ Despite some enthusiastic claims about its taste being as good as the real thing, this early 'kit beer' was regarded as purely medicinal by the Royal Navy's sailors, and an attempt to replace their beer ration with it had been abandoned several years before the first fleet sailed. The Royal Navy nevertheless continued to issue malt essence for medicinal purposes until 1798, when its use was discontinued in favour of lemon juice.⁹⁴

Beer made from malt extract is an interesting aside in the history of brewing, but the makers of this common naval supply are not what historians have had in mind in looking for Australia's first brewer. Just who does deserve this honour has been addressed by many writers, and there is a small range of claims, some strongly worded, on the matter. Stating that someone was 'the first' in any endeavour always runs the danger of quick falsification by another historian possessed of a piece of missed but telling information. And even if no stone is left unturned, it is of course quite possible that there are better claimants whose absence from the records makes them unknown to us. The search here for Australia's first brewer has exhausted all of the lines of inquiry which were apparent: given the early date at which he was operating, it is unlikely that many if any preceded him.

⁹³P. G. Fidlon and R. J. Ryan (eds), *The Journal of Arthur Bowes Smyth: Surgeon, Lady Penrhyn, 1787-1789*, Australian Documents Library, Sydney, 1979, p. 25. This entry for 20 July 1787 reads: 'Brew'd Spruce Beer this day for the use of the Cabin'. Its use was not always to good effect. On 1 January 1796, Richard Aitkins thought his illness at the time 'arrose from my having drank some spruce beer that was sower' (*Voyage to Botany Bay (Journal 1787-1810)*, Transcript copy, NLA, FRM NK 1523, p. 198).

⁹⁴Mathias, *Brewing Industry*, pp. 204-9.

While a few historians have speculated about anonymous early brewing efforts, using various ingredients,⁹⁵ there have been only two serious contenders for the title: John Boston and James Squire (or Squires). Given that both men were brewing in the eighteenth century, we can dismiss a third name which has been put forward: the operator of the government brewery established in Parramatta in 1804.⁹⁶ The basis for this mistaken claim is probably an over-reliance on (and hasty use of) *Historical Records of New South Wales* and *Historical Records of Australia*. The index to volume IV of the former contains the entry 'Beer, earliest manufacture of, in colony' in referring to correspondence on the government brewery. Volume II of the same series contains some of the private correspondence which helps disprove this claim. *Historical Records of Australia* does not make the same mistake in the index, but, being solely a collection of official correspondence, may mislead the unwary by only containing the details of the government brewery. Mention has been found of only one other brewer in the colony in the eighteenth century. This is the mysterious and very old Scotch prophetess who accosted Governor Hunter on the road from Toongabbie to Parramatta in April 1798 in order to defend her name against claims that she was fermenting trouble among the populace. She stated that 'she made a little beer, and sold it to the labouring people' from her hut.⁹⁷ But she also is brewing well after the first efforts of both Squire and Boston. The question, then, is whether Boston or Squire was first. Answering this question is of intrinsic interest, but it also introduces the reader to a number of themes which run through the history of brewing in the first decades of the nineteenth century.

⁹⁵For example, 'It is said that horehound beer, or what was called beer, was made in the early days from the honey of the small Australian bee, bittered with this herb' (Walter Hibble, 'Early History of Ryde and Surrounding District', *Journal of the Royal Australian Historical Society*, vol. 3, 1916, p. 285). No sources are given.

⁹⁶See, for example, Fagan's entry on the brewing industry in the *Australian Encyclopaedia*, 1983, vol. 2, p. 79. Fagan's mistaken view is curious given that entries in the 1977 and 1965 editions mention John Boston brewing from 1796. The government brewer, unnamed by Fagan, was Thomas Rushton, who was to be a significant figure in the industry for nearly twenty years.

⁹⁷David Collins, *Account of the English Colony in New South Wales* (Vol. II) [Cadell and Davies, London, 1802, p. 107] Facsimile edition, Libraries Board of South Australia, 1971.

James Squire

The Secretary of State for the Colonies, Henry Dundas, in a letter to Governor Phillip dated 10 January 1792, noted that

The men composing the corps which has been raised to serve in New South Wales under Major Grose have, as a condition of their enlisting, been promised the usual ration, except spirits, without any deduction from their pay... When the cultivation of the settlement is somewhat farther advanced, the means of supplying the deficiency in the ration with beer will, I have no doubt, be one of the objects of your consideration.⁹⁸

Phillip's reply was not optimistic: 'The supplying the deficiency of spirits with beer may be done hereafter, but the former part of this letter will show that that time is distant'.⁹⁹ The 'former part' was his report on the state of agriculture in the colony, which, whilst having its successes, was beset by drought, grubs and other problems.

Despite Phillip's pessimism, it is likely that small scale brewing was already going on. Certainly, in 1793, the year after Phillip returned to England, beer was being produced from imported hops and malt. The man who produced this beer was almost certainly James Squire, who went on to be the colony's foremost brewer before his death in 1822.

On 29 December 1820, Squire gave oral evidence to the Bigge Inquiry into New South Wales and Van Diemen's Land.

I have been in the Colony from its earliest establishment and for 30 years I have been a brewer. At first I lived in Sydney, and brewed beer in small

⁹⁸HRA I, p. 331.

⁹⁹Letter to Dundas, 2 October 1792, HRA I, p. 376.

quantities. I sold it then for 4d per quart and made it from some hops that I got from the Daedalus. I also brewed for General Grose & Col. Paterson for their own consumption from English Malt. I have been established at Kissing Point as a Brewer for 28 years, and have brewed beer from Indian corn and Colonial Barley.¹⁰⁰

Whilst not claiming to be the first brewer, his claim to have been brewing since early 1791 certainly implies that few if any preceded him in this trade.

In a memorial to Governor Macquarie dated 22 March 1819 Squire described himself simply as a licensed brewer and vendor of malt liquors 'for Many Years'.¹⁰¹ The claim of being Australia's first brewer was made more explicit after his death on 16 May 1822, by the inscription on his headstone which read:

He arrived in this Colony in the first Fleet, and by Integrity and Industry acquired an unsullied Reputation. Under his Care the HOP PLANT was first Cultivated in this Settlement and the first BREWERY was Erected which progressively matured to Perfection.¹⁰²

A few years after Squire's death, Peter Cunningham described him as 'the first colonial brewer, and long too the *only* one who prepared a colonial *solatium* for our drouthy population'.¹⁰³ This has often been cited as an authority, but it was

¹⁰⁰In John Ritchie (ed.), *The Evidence to the Bigge Reports* (Vol. 1 The Oral Evidence), Heinemann, Melbourne, 1971, p. 116.

¹⁰¹HRA X, p. 83.

¹⁰²Lionel Gilbert, *A Grave Look at History*, John Ferguson, Sydney, 1980, p. 106. Squire was originally interred in the Devonshire Street Cemetery, but was removed to Botany Cemetery in 1901, with most of the others, to make way for Central Station. His headstone was also moved to Botany, but cannot now be identified. This final resting place is across the bay from where the first imported beer was drunk in the new colony on 19 January 1788.

¹⁰³Cunningham, *Two Years* [vol. I, p. 91] Facsimile edition. In another edition also published in 1966 – by the Royal Australian Historical Society and Angus and Robertson, the editor, David Macmillan, disagrees: Squire 'was not the "first colonial brewer" as Cunningham states, but he began operations at the early date of 1800' (p. 365, note 7).

not a claim made with direct knowledge of the very early years of Australian settlement. Cunningham made five trips to New South Wales between 1819 and 1828, taking up land in the Upper Hunter in 1825 and 1826.¹⁰⁴ His statement seems to be based on Squire's own testimony: the tone is of a friend or acquaintance, as he relates how 'the jocose compounder of the beverage took a pleasure in quoting' an epitath in Parramatta churchyard saying 'Ye who wish to lie here, Drink Squires's beer!'.¹⁰⁵

Other contemporary opinion is more ambiguous than Cunningham's. The artist, Joseph Lycett, who had arrived in 1814, bestowed on his late friend the title of the 'Whitbread of Australia', but he did not describe Squire as the first brewer.¹⁰⁶ *The Sydney Gazette's* obituary of 25 May 1822 stated 'He was the first that brought hops to any perfection and hence was enabled to brew beer of an excellent quality'. Whilst his beer 'was well known', Squire was not remembered by the *Gazette* as the first brewer in the country. It also dates his arrival at Kissing Point at 1796 not 1792 or 1793.

Ever since his death, there has been a vigorous stream of opinion in support of Squire as Australia's first brewer, and a just as vigorous denial of the claim. The entry for breweries in Heaton's *Australian Dictionary of Dates* in 1879 says 'The first ale made in Australia was manufactured by Mr James Squire (a retired soldier)... at Kissing Point, Parramatta River, in the year 1795'.¹⁰⁷ Walter Hibble declared James Squire to be the 'first man to enter upon the business of brewing in a legitimate and open manner'.¹⁰⁸ Following the fashion then of limited referencing of sources, Hibble is tantalizingly unhelpful about the details.

¹⁰⁴L. F. Fitzhardinge, 'Cunningham, Peter', ADB, vol. I, p. 268.

¹⁰⁵Cunningham, *Two Years* [vol. I, pp. 91-2] Facsimile edition. 'Unfortunately this headstone is no longer extant, or maybe it is one of those now completely indecipherable' (Judith Dunn, *The Parramatta Cemeteries: St John's*, Parramatta and District Historical Society, Sydney, 1991, p. 10).

¹⁰⁶*Views in Australia* [J. Souter, London, 1824] Reprinted by Thomas Nelson, Melbourne, 1971.

¹⁰⁷J. H. Heaton, *Australian Dictionary of Dates and Men of the Time*, S. W. Silver & Co., London, 1879, p. 43.

¹⁰⁸Hibble, 'Ryde', p. 285.

It is difficult at this distance of time to discover exactly what use Mr Squire made of his first grant of land... but there is no doubt that as early as 1795 he brewed his first beer, but the bitter constituent used in its manufacture was certainly not hops.

He suggested the use of horehound, supplied from the government stores. Whilst offering 1795 as the year Squire began to brew, the first published source he quoted was an advertisement in the *Gazette* in 1804. Hibble accepted the judgment on stone from 1822 and relied very much on the recollections of an 85 year old descendant of Squire, Mrs Watson. Oral evidence has great value in providing details and textures which the records do not yield; but getting the chronology right is not one of its strengths. There is also the possibility that family pride, like friendship, influences the memory.

A chaotic and inaccurate book on Ryde by R. Carmichael in 1926, whilst not claiming that Squire was the first brewer, reproduces a picture of substantial two storey buildings and a wharf, labelled 'Squire's Brewery, Kissing Point, 1791'.¹⁰⁹ Eleven years later, H. J. Rumsey stated that Squire 'Started a brewery at Sydney, and later, about 1792, established one at Kissing Point, where he had a grant of 30 acres'.¹¹⁰ Whilst no source is given, this is clearly based on Squire's evidence to the Bigge Inquiry.

A forthright attack on the idea of Squire as our first brewer was mounted by M. C. I. Levy in 1947.¹¹¹ Taking up the claims of Hibble, Carmichael and Rumsey, Levy focused on when Squire took up his grant at Kissing Point and on the absence of any corroboration from the records to support the claim that Squire was first. Levy felt he was responding to 'a legend', and in particular to a family tradition which, first, 'assiduously denied' that Squire used a bittering agent other

¹⁰⁹R. Carmichael (ed.), *Ryde 1790-1926*, Frank Pacey, Ryde, 1926, opposite p. 20. The painting was actually done c. 1820.

¹¹⁰H. J. Rumsey, *The Pioneers of Sydney*, Sunnysbrook Press, Sydney, 1937, p. 97.

¹¹¹M. C. I. Levy, *Wallumetta: A History of Ryde and Its District 1792-1945*, Sydney, 1947.

than hops and, second, claimed that 'his brewery was started at the end of the 18th Century, say 1798 or 1799'. He dismissed all of this as 'merely suppositious', and settled on 1802-04 as the period when Squire began brewing.¹¹² Levy's strong position was responded to equally strenuously in an unpublished family history by J. K. Lavett completed in 1965.¹¹³

Lavett quotes the headstone and Cunningham, but the heart of his argument is Squire's evidence to Bigge. Whilst admitting that the evidence is not supported by other sources, for example, the *Gazette* obituary, Lavett feels that it is sufficient to meet Levy's concern that there is no corroboration from the records: 'until more definite evidence is available in this respect, I am prepared to accept Squire's own obviously well-considered statements'. Echoing Hibble from half a century before, he declared, 'So, let it be said that James Squire was the first man to enter upon the commercial business of brewing in Australia in a legitimate and open manner'.¹¹⁴

Lavett's conclusion is not just a matter of family pride. Other historians have taken Squire's evidence to Bigge as largely correct. Both Hainsworth and Walsh accept the details of Squire's early brewing record, correcting only his claim to have been brewing at Kissing Point from 1792, to accord with evidence that Squire took up land there in 1795. Hainsworth states that 'In 1795 he established hop fields, a brewery and a tavern at Kissing Point' while Walsh dates this development from 1795.¹¹⁵

Lavett argues that 'It can be taken as very certain that Squire would not have misrepresented his position with The Honourable John Thomas Bigge, Esq, Commissioner of Enquiry, acting under instructions from the Home

¹¹²Levy, *Ryde*, p. 48.

¹¹³The Kissing Point Squires: Pages from the History of a Nation. The Story of James Squire and Frederick Garling, Adelaide, 1965, NLA, MS 1251.

¹¹⁴Lavett, Squires, NLA, MS 1251, p. 26.

¹¹⁵D. R. Hainsworth, *Builders and Adventurers*, Cassell, Melbourne, 1968, p. 135; G. P. Walsh, 'Squire, James', ADB, vol. 2, p. 468.

Government!'.¹¹⁶ The majesty of law and office, however, does not seem a sufficient basis for accepting Squire's claim, the more so because, while the rest of Squire's evidence to Bigge, concerning his brewing operations in 1820, is very convincing, his statement of his beginnings in the trade at first sight appears to be internally inconsistent, inconsistent and implausible against other evidence, and uncorroborated by any other sources. These problems can largely be resolved and there emerges a stronger case for the claim that he was Australia's first brewer.

There are two parts to Squire's evidence to Bigge. First, he was brewing in a small way in Sydney from 1791, both for sale and for Grose and Paterson, and that he was using hops and English malt for some of this time. Second, he was engaged in his eventually more substantial brewing operation at Kissing Point from 1792. There is from the start some confusion with the dates. He seems to say that he began brewing thirty years ago, that is, in early 1791, with hops from the *Daedalus*, which first arrived in 1793. This may be a matter of the use of words. When he said 'I sold it then', perhaps he meant 'Then I sold it'. That is, he began brewing in a small way, probably without hops, in Sydney in 1791, and at Kissing Point in 1792. Then, in 1793, with the arrival of the *Daedalus*, he began brewing beer, made with hops, for sale at 4d per quart. At the same time he was brewing for Grose and Paterson from the same hops and with English malt. Grose was Lieutenant-Governor from 31 December 1792 to 15 or 17 December 1794, and Paterson was administrator from then until 11 September 1795.

Squire's claim fits with the dates of the administrations of Grose and Paterson, but there remains the problem that there is no support for his claim from others. David Collins's detailed account, for example, does not mention Squire's efforts. The record of Squire's life is similarly unhelpful. Born in 1754 at Kingston upon Thames in Surrey, he received a seven year sentence there on 11 April 1785 for the theft of nine chickens and other goods and was transported to

¹¹⁶Lavett, Squires, NLA, MS 1251, p. 17.

Australia in the first fleet.¹¹⁷ On 5 March 1789 he gave evidence on the theft by two fellow convicts of six cabbages. The thieves received fifty lashes each.¹¹⁸ In the same year, Squire himself was whipped for stealing some medicines from hospital stores along with a pound of pepper. His sentence of 14 November 1789 read: 'To receive three hundred Lashes, one hundred and fifty now, and the Remainder when able to bear it'.¹¹⁹ He was a convict servant to Ralph Clark, a lieutenant in the marines, shortly before Clark was sent to Norfolk Island on 5 March 1790.¹²⁰ On 19 August 1791 he and another man were fined five pounds each for 'buying the Necessaries' of a private, both protesting that they did not know it was a crime.¹²¹ Each man was to present himself within three weeks to pay. This reference to private trade and to a large fine is suggestive of Squire having established himself in business and fits with his claim to have begun brewing earlier that year, but it is hardly evidence of his activities at the time. Nor can it be assumed from this incident that Squire had received a pardon before the expiration of his sentence in April 1792. The evidence suggests that he did in fact see out his time. Being a convict however in no way precluded being a brewer either for private use or for sale.¹²² After his court appearance there is little known about Squire for the next thirteen years. The baptisms of his children in

¹¹⁷Mollie Gillen, *The Founders of Australia*, Library of Australian History, Sydney, 1989, p. 341; or else for highway robbery, according to G. P. Walsh, 'Squire, James', ADB, vol. 2, p. 468.

¹¹⁸John Cobley, *Sydney Cove 1789-1790*, Angus and Robertson, Sydney, 1963, p. 18.

¹¹⁹Cobley, *Sydney Cove 1789-1790*, p. 111. He was at the time employed in the laboratory tent (Gillen, *Founders*, p. 342).

¹²⁰P. G. Fidlon and R. J. Ryan (eds), *The Journal and Letters of Lt Ralph Clark*, Australian Documents Library, Sydney, 1981. Squire is mentioned as part of a party led by Clark which met some aborigines at Lane Cove on 15 February 1790 (p. 109), and as one of a small party which collected the plant sweet tea on 27 February for Clark to take to Norfolk Island (p. 114).

¹²¹Bench of Magistrates Sydney, Minutes of Proceedings, February 1788 to January 1792, AONSW, SZ765, 19 August 1791 (COD 17, p. 314); John Cobley, *Sydney Cove 1791-1792*, Angus and Robertson, Sydney, 1965, pp. 102-3.

¹²²J. K. Lavett, *The Kissing Point Squires: Pages from the History of a Nation. The Story of James Squire and Frederick Garling*, Adelaide, 1965, NLA, MS 1251, states that Squire was pardoned in 1790 but gives no source for the claim (p. 14) which is based instead on the assumption that he must have been pardoned in order to brew in 1790 (p. 17). On p. 11, Lavett says that Squire served his time and refers to a source which supports this. The entry for 22 July 1795 in the Return of Grants of Land 1792-95, ML, BT 88, p. 13, lists Squire as a 'Convict whose sentence is expired'.

1794, 1796, 1798 and 1800 are recorded,¹²³ but the first hard evidence of his brewing is not until 1804, when he advertised for over 2,000 bushels of barley and maize.¹²⁴ By then he was brewing on some scale, but the question remains of when he began.

The lack of corroborating evidence about Squire's use of hops from the *Daedalus* is of particular concern, because it seems such an unlikely ship to have brought such a cargo to Australia. The *Daedalus* was the store ship for George Vancouver's mapping expedition on the North West coast of North America¹²⁵ and had left England in August 1791 travelling *via* Cape Horn and the Marquesas. Having missed their original rendezvous in May 1792, Vancouver's two ships – the *Chatham* and *Discovery* – and the *Daedalus* finally met in August, before moving down the coast to Monterey for the winter. On 29 December 1792, the *Daedalus* left for Sydney, carrying livestock from Monterey, most of which died on the trip. On the way, hogs were purchased in Tahiti and two Maoris were blackbirded in New Zealand to make flax in the colony, before she arrived on 20 April 1793. She left Sydney on 1 July with supplies for Vancouver's expedition, returning on 3 April 1794 with an interesting assortment of goods, including, according to Aitkins, the breadfruit tree and kava,¹²⁶ but no hops. This second voyage is not the one mentioned by Squire and, anyway, it was a trip from Sydney to Nootka Sound and return, which is very unlikely to have afforded any chance to acquire some hops. According to the available published material, the first arrival of the *Daedalus* in 1793 does not seem any more promising.

¹²³John Copley, *Sydney Cove 1793-1795*, Angus and Robertson, Sydney, 1983, p. 130, *Sydney Cove 1795-1800*, Angus and Robertson, Sydney, 1986, pp. 52, 214 and 410.

¹²⁴SG, 1 July 1804, 11 November 1804.

¹²⁵The following details of movements come from Cumpston, *Shipping*, pp. 28-9, and George Vancouver, *A Voyage of Discovery to the North Pacific Ocean and Round the World 1791-1795* [1798] Edited by W. K. Lamb, Hakluyt Society, London, 1984, vol. II, pp. 517, 652, 660, 727, 734-6, 771, 776, 784, and vol. IV, pp. 1574-8.

¹²⁶HRA I, pp. 266, 428, 447; Copley, *Sydney Cove 1793-1795*, pp. 47, 123; Richard Aitkins, *Voyage to Botany Bay (Journal 1787-1810)*, Transcript copy, NLA, FRM NK 1523, p. 169.

After the other ships had been replenished, Vancouver directed the captain of the *Daedalus* 'to use his discretion in thus appropriating such articles of traffic consigned to me, as yet remained on board the *Daedalus*'.¹²⁷ But supplies were low on Vancouver's ships and the crews had been on reduced rations before finally rendezvousing with the *Daedalus*,¹²⁸ suggesting considerable capacity on the *Chatham* and *Discovery*. Further, the stores on the *Daedalus*, in particular, the wine and spirits, had suffered 'Considerable loss' on the voyage from 'improper stowage'.¹²⁹ Finally, part of the cargo the *Daedalus* was to carry to Sydney was not to be used by the colonists but was to be forwarded to Vancouver at Nootka Sound.¹³⁰ When it arrived, Grose lamented that 'the *Daedalus* is sent here more for the purpose of asking than giving assistance'.¹³¹

And yet the *Daedalus* did not arrive empty-handed. Unsurprisingly, there is no mention in Vancouver's account or his letters to Phillip of her cargo,¹³² but the Colonial Office has lists signed by Vancouver on 29 December 1792 of 'Provisions... remaining on board the *Daedalus*' and those 'not wanted by the *Discovery*... [to] be disposed of as his Excellency governor Phillips may direct'.¹³³ Among some vinegar, wheat and salt, there are sixteen casks of essence of malt, seven casks of malt and four casks of hops which were surplus to his requirements.

These invoices are crucial in assessing Squire's evidence to Bigge as they provide corroboration for what would otherwise seem an unlikely claim. There is certainly enough here to keep Grose, and Paterson after him, in beer made from malt, while the hops may have come to about 1,200 lbs.¹³⁴ At a high rate, by

¹²⁷Vancouver, *Voyage*, vol. II, p. 736, HRNSW I, Part 2, pp. 681-2.

¹²⁸Vancouver, *Voyage*, vol. II, p. 517, fn. 1.

¹²⁹Vancouver, *Voyage*, vol. IV, p. 1776.

¹³⁰Vancouver, *Voyage*, vol. IV, p. 1574.

¹³¹Lieutenant-Governor Grose to Henry Dundas, 21 April 1793, HRA I, p. 428.

¹³²These are dated 15 October and 29 December 1792. Nor is there any mention in his instructions to the captain of the *Daedalus*, see Vancouver, *Voyage*, vol. IV, pp. 1574-8 and HRNSW I, Part 2, pp. 681-3.

¹³³Secretary of State Correspondence, 1793, PRO, CO 201/8, p. 32 (AJCP 4).

¹³⁴The basis for this estimate is the cargo of hops brought on the *Glatton* in 1802, which weighed

modern standards, of an ounce of hops per gallon,¹³⁵ over 19,000 gallons of hopped beer could have been produced for a population of under 4,000. Commercial sale of such quantities is very likely. Of course, the casks of hops could have been much smaller, but even so, the amount of beer produced must have been in the thousands of gallons.

As with his claim about the *Daedalus*, Squire's evidence to Bigge about when he started at Kissing Point seems at first to be unlikely. According to Squire, he arrived there in 1792 or 1793, and yet his grant of land of 30 acres is dated 22 July 1795.¹³⁶ However, this does not preclude Squire working, and brewing, on a property in Kissing Point before this. Ten grants in Kissing Point were made on 22 February 1792, followed by two more on 10 July and one on 29 September of the same year.¹³⁷ Most interesting is one of the grants from 22 February 1792, to John Chapman Morris, which was forfeited, 'the grantee not having proceeded to the cultivation of it'. This grant of 30 acres seems to have passed to Richard Cheers on 29 September. It was close to the water in a line of five properties, the other four of which were granted on 22 February.¹³⁸ A connexion clearly existed later between Morris and Squire, who was the administrator of Morris's estate upon Morris's death in 1806.¹³⁹ Perhaps Squire had been intending to go with Morris to farm, and when this fell through, he went with Cheers instead. Both Cheers and Morris were to show an interest in the liquor industry. Retail liquor licences were first issued in April 1796, and renewed

1,818lbs and was brought in six casks, see HRA III, p. 560; HRA IV, pp. 458-9, 606.

¹³⁵For a discussion of hopping rates among contemporary English brewers, see Chapter 6.

¹³⁶Grants of Land Register 1794-96, vol. 1A, p. 474, LTO; R. J. Ryan, *Land Grants 1788-1809*, Australian Documents Library, Sydney, 1981, p. 53.

¹³⁷Ryan, *Grants*, pp. 8-11.

¹³⁸Grimes's Plan of 1796 shows properties by name. There is no holding in Morris's name. The two grants of 10 July to Hawkes and Hatton were for 50 acres. A return of land in cultivation dated October 1792 in the Liverpool Papers in the British Museum dates the settlement of the first nine properties as 10 January 1792 (two) and 24 January (seven). Hawkes settled on 23 May, Hatton on 29 May and Cheers on 15 August (see A. G. L. Shaw, 'Missing Land Grants in New South Wales', *Historical Studies*, vol. 5, November 1951-May 1953, pp. 286-7).

¹³⁹SG, 4 and 11 May 1806, 19 July and 2 August 1807, and 19 February 1809; Old Register, Book 2, p. 3, no. 17, LTO.

every twelve months. Unfortunately, the records for 1796 or 1797 are lost. In the extant 1798 record, Cheers has a licence for the Black Bull in Sydney, and Morris a licence for the Highlander in the Hawkesbury.¹⁴⁰ A further suggestive fact is that Cheers's property was behind the riverside location of Squire's tavern, which was between today's Ryde Bridge and the old Ryde Wharf at the end of present day Belmore Street.¹⁴¹ Squire had received one of the liquor licences issued in 1798. The name of his tavern, the Malting Shovel, is suggestive of a brewery attached. It is quite possible that Squire went to Kissing Point in late 1792 to work on Cheers's land, either as an employee or partner. He commenced brewing there, and, when the *Daedalus* arrived, was known to Grose, who arranged for Squire to convert the malt and hops to beer for personal use and for profit, an arrangement carried on by Paterson, who rewarded Squire for the great service of setting beer on his, and the public's, table by granting him 30 acres of his own at Kissing Point. Squire's brewery could have moved to his own grant in 1795, although there are no obvious advantages to this move away from the river. The brewery for which he was to be famous among his contemporaries was established on 25 acres of land granted to John Pollard on 15 September 1796.¹⁴² This, like Morris's grant, was cancelled.¹⁴³ Like Squire's tavern, the brewery was located on the river. The site is now occupied by naval slipways and Bennelong and Kissing Point parks.

Other names than Cheers suggest themselves as an associate of Squire in his earliest years in Kissing Point. Between the tavern and the brewery site were four grants made on 22 February 1792. These were to John Bazely, John Callaghan, William Careless and James Weavers. The first three grantees were

¹⁴⁰Bench of Magistrates, Sydney, Licences Issued 19 September 1798, AONSW, SZ766, pp. 90-2 (COD pp. 1-3). Interestingly, the £5 surety for Cheers's licence was given by John Boston, who also stood surety for 2 other licencees, among the 31 granted in total.

¹⁴¹Levy, *Ryde*, p. 50 locates the tavern about where the Ryde wharf stood.

¹⁴²SG, 3 May 1817; Ryan, *Grants*, pp. 66 and 81. The advertisement in the *Gazette* says the land was granted by Colonel Paterson; it was in fact granted by Governor Hunter

¹⁴³See the Index to Grants of Land Registers, LTO. The grant is in vol. 1A, p. 557.

later to sell their land to Squire, while Weavers stood surety for Squire when the latter obtained his liquor licence in 1798.¹⁴⁴ In short, there was ample opportunity for Squire to have resided in Kissing Point and brewed there from 1792.

The absence of any mention of Squire's brewing activities until the early 1800s may seem curious, but the malt and hops of the *Daedalus* and its product are not mentioned by anyone, not even that astute consumer, Collins, whose list of prices for December 1793 does not include colonial beer. We are left then with Squire's own word and the knowledge that someone must have used these valuable ingredients in 1793. We have also the distinct possibility that Squire did move to Kissing Point in 1792, before he received his grant of land in 1795. Squire's account to Bigge, which at first seems implausible in some of its details, is convincing. It is reasonable to conclude that he was our first known brewer, producing, though goodness knows from what ingredients, as early as 1791, and from malt and hops in 1793.

John Boston & Co.

Squire's early efforts were followed in 1795 by the first known beer in the colony to be produced largely from locally grown ingredients. The men who produced the second brew – John Boston, Thomas Fyshe Palmer and James Ellis – were three entrepreneurs who made up Australia's first diversified business group, called by several historians: Boston & Co.

Just before leaving the colony on 29 September 1796, David Collins recorded prices for a range of goods and services, which were subsequently published in the first volume of his book. Below imported porter at two shillings a bottle is the entry 'Beer made at Sydney' for one shilling and six pence. Whether

¹⁴⁴For the purchases see SG, 3 May 1817, where Bazely is called Beasley and Callaghan is called Caryhorn. In a small park at the corner of Regent and Waterview streets, Ryde, is a plaque which directs the reader's attention to the sites of the brewery to the east, the tavern to the west, and the properties of William Careless and James Weavers, the latter of which was directly behind the park.

this was for a bottle, quart or gallon is unclear. In the text, there is a description of the beer, which

was brewed from Indian corn, properly malted, and bittered with the leaves and stalks of the love-apple, (*Lycopersicum*, a species of *Solanum*,) or, as it was more commonly called in the settlement, the Cape gooseberry. Mr Boston found this succeed so well, that he erected at some expence a building proper for the business, and was, when the ships sailed, engaged in brewing beer from the abovementioned materials, and in making soap.¹⁴⁵

Most of the writers who have called Boston 'Australia's first known brewer' have relied on Collins as their source.¹⁴⁶ They have therefore taken 1796 as the year Boston commenced brewing and have assumed that he operated on his own. Boston's name and the year 1796 were brought to a wider audience by the appearance in 1988 of a beer commemorating the Australian bicentenary called John Boston Special Lager. In fact, Boston was in a remarkable partnership with Thomas Fyshe Palmer and James Ellis, and together they had begun brewing in mid-1795.

John Boston was a very noticeable character in early Sydney, who arrived on board the *Surprise*, on 25 October 1794, with his wife and two children aged six and four.¹⁴⁷ He had come to the colony as a free settler, with officials in

¹⁴⁵Collins [1798, p. 499]. There is some confusion here. The love-apple (*Solanum lycopersicum*) is the tomato, not the Cape gooseberry (*Physalis peruviana*), which is a yellow, marble-sized fruit in a papery husk, sometimes called, evocatively, Chinese Lantern, and also, interestingly, given the confusion among the settlers, the husk tomato (*Yates Garden Guide*, Fontana, Sydney, 1981, p. 91). Both tomatoes and Cape gooseberries do well in Sydney, and are very similar to cultivate. Collins's use of the correct botanical name for the tomato does suggest that it was the bittering agent used.

¹⁴⁶See, for example, *Australian Encyclopaedia*, 1958, vol. 2, p. 109 and 1977, vol. 1, p. 377; Levy, Ryde, p. 48.

¹⁴⁷T. G. Parsons, 'Was John Boston's Pig a Political Martyr?', *Journal of the Royal Australian Historical Society*, vol. 71, part 3, 1985, pp. 166 and 168.

Britain hoping that he would 'prove particularly useful to the settlement by curing fish and making salt, the objects to which his attention has been particularly drawn'.¹⁴⁸ In a letter to Under-Secretary King dated 5 December 1793, Boston had presented himself, though with some modesty and honesty, as a man of many talents.

I was brought up a surgeon and apothecary, but have never since followed that profession. I have since made my particular study those parts of chemistry that are more particularly usefull in trade and business. Have, therefore, a knowledge of brewing, distilling, sugar-making, vinegar-making, soap-making, etc. I have been in business as distiller, but was unsuccessful. I likewise have a theoretical and some practical knowledge of agriculture.¹⁴⁹

Having begun with such high official hopes, Boston arrived in the colony under a cloud, for his role in the so-called 'Surprise mutiny' and his association with the Scotch Martyrs who also travelled on the *Surprise*. The story of the Martyrs has been of interest to writers for 200 years.¹⁵⁰ Advocates of parliamentary reform and the Rights of Man as presented by Thomas Paine, they were tried and convicted of sedition in Britain in 1793 and 1794. Four of the five – Thomas Fyshe Palmer, Thomas Muir, William Skirving and Maurice Margarot – arrived on the *Surprise*, while the fifth – Joseph Gerrald – arrived in the colony after the others, and in ill-health, on 5 November 1795. The Martyr who concerns us here – Palmer – was a well-connected, well-off clergyman. He was

¹⁴⁸Henry Dundas to Lieutenant-Governor Grose, 15 February 1794, HRA I, p. 464.

¹⁴⁹HRNSW II, p. 100.

¹⁵⁰See for example, HRNSW II, pp. 821-886; Frank Clune, *The Scottish Martyrs*, Angus and Robertson, Sydney, 1969; Parsons, 'Pig'; Michael Flynn, *Settlers and Seditious: the People of the convict ship Surprise, 1794*, Angela Lind, Sydney, 1994. Given the present topic, it is worth noting that 'the mutiny' was precipitated, according to the Captain's deposition, by the punishment of two sailors for the theft of a part of a cask of porter (HRNSW II, p. 862).

accompanied by James Ellis, a young cotton-spinner from Glasgow who had lived with Palmer in Dundee and was given leave to sail on the *Surprize* with the status of a free settler on his arrival in New South Wales.¹⁵¹ From the evidence available to us, it seems that Muir and Skirving, and later, Gerrald, mainly confined themselves to farming and were not greatly involved in the commercial and political life of the colony.¹⁵² Their stays in Sydney were also brief. Muir escaped the colony in February 1796; Gerrald died in March of the same year; Skirving died three days later. Margarot had fallen out with his colleagues on the voyage and was excluded from their circle in Sydney. But Boston, Palmer and Ellis formed a close business partnership which included farming, sealing, coalmining, importing, shipbuilding and the manufacture of salt, soap and beer. Broadly speaking, Boston was, given his experience, managing director of Boston & Co., with Ellis providing the labour and Palmer the capital.

In a letter dated 16 September 1796, Palmer thanked his correspondent, the Reverend Lindsey, as a benefactor 'to us three', in particular for

the gift of the substitute for Hops. We brew for our lives, sell our beer to considerable profit, which is in high estimation, and seldom use any other bitter. Despotic caprice & the opposite interest of a monopoly which

¹⁵¹Clune, *Martyrs*, pp. 19 and 23. HRA I, p. 463 has Under-Secretary King's letter to Lieutenant-Governor Grose on this matter, dated 14 February 1794. At Palmer's request, his brother, a doctor at Peterborough, made representation to the Home Office through Lady Carysfort that Ellis be permitted to accompany Palmer as a free settler; see letters dated 6 and 9 January 1794, in HRNSW II, pp. 834 and 836.

¹⁵²While 'Palmer is always upon the bustle', Skirving 'has purchased a farm to which he has retired and is but little seen' (George Mackaness (ed.), *Some Letters of Rev. Richard Johnson*, Sydney, 1954, vol. II, p. 12). (Johnson's own house was on the corner of present day Hunter and O'Connell streets, just down the road from Palmer, putting Johnson in a good position to watch Palmer's comings and goings.) Muir 'devoted himself... to the cultivation of a little patch of land... reading works he had been able to bring with him, and... catching fish' from a small boat he possessed, according to the *Histoire de la Tyrannie du Gouvernement Anglais* (Paris, 1798), quoted in John Earnshaw, *Thomas Muir: Scottish Martyr*, Studies in Australian and Pacific History, no. 1, Sydney, 1959, p. 20. Earnshaw also notes (p. 13) that Muir and Palmer had fallen out on the trip to Sydney. Muir's correspondence shows this rift was healed (13 December 1794, HRNSW II, p. 869). This is confirmed by Palmer, 23 April 1796, Thomas Fyshe Palmer Papers, ML, MSS B1666, p. 11.

flourishes by universal & pernicious use of spirits, have not hithertoo hindered us of this honest livelihood, though they have refused to give us the least assistance.¹⁵³

As well as shedding some light on the source of the substitute for hops mentioned by Collins, this letter also suggests, along with Collins's report, that Boston & Co. had been brewing for some time. This was the case. In a letter from Palmer to Lindsey, dated 15 September, 1795, he says that Boston and Ellis 'manufacture beer, vinegar, salt, soap, etc, for sale. I have a farm',¹⁵⁴ while in a letter dated 25 October 1795 to a friend in Perth, Scotland, Palmer says that 'Ellis lives with me to brew and farm'.¹⁵⁵ It seems that they were brewing before September 1795.

Coming from the other direction, in a letter written on 13 June 1795, Palmer noted that

Mr Ellis and Mr Boston were ordered into confinement for entering a ship and endeavouring to purchase things, not prohibited, for their use. With great respect, but firmness, they remonstrated against this invasion of the common rights of British subjects. This was construed into an audacious attack upon the privileges and interests of these military monopolists. And from that time (now many months ago) they have set their faces against them and me. They [ie Boston and Ellis] have had no grants and no servants. Mr Boston, though sent out by the government to cure fish and make salt, has been unemployed. My men, which I bought at a monstrous rate, with a farm, have been taken from me.¹⁵⁶

¹⁵³Thomas Fyshe Palmer Papers, ML, MSS B1666, pp. 11-12.

¹⁵⁴HRNSW II, p. 881.

¹⁵⁵Robert Millar Papers, ML, FM 4/229.

¹⁵⁶Letter to the Reverend John Disney, in Thomas Muir Papers, ML, MSS 948, p. 97. It is likely that Palmer means that the men only were taken from him.

Sometime after this date Boston did begin making salt.¹⁵⁷ It seems that he and his associates began experimenting with the manufacture of other goods including beer at the same time. There is no mention in Palmer's letter of 13 June of their intention to brew beer; it is reasonable to assume that a few weeks passed before they decided on this difficult venture and produced their first batch. It is most likely, therefore, that their first brew was consumed by the public sometime after mid-July.

This timing makes sense for other reasons. A winter brew was less likely to spoil than one produced under primitive conditions during a Sydney summer. More compellingly, the timing after June is supported, and Boston's seemingly curious use of maize (Indian corn) explained, by the fact that maize was plentiful. Writing to Henry Dundas on 15 June 1795, the Administrator, Captain Paterson, noted that 'there is at this time, with the grain just arrived from Bombay, a sufficient quantity of Indian corn received into store, and remaining to gather, to serve us until the ensuing wheat harvest'.¹⁵⁸ At the same time, Palmer wrote to Disney that '[T]he situation the colony is in at present is dreadful... The only resource is about three months provision of Indian corn, a food inadequate to labour'.¹⁵⁹ Clearly, though, it was adequate for brewing.

Where Boston & Co. brewed is not certain, but it seems most likely that it was in Palmer's town house. Upon their arrival in Sydney, Muir, Skirving and Palmer had been assigned three houses 'in a row on the east side of the Cove',¹⁶⁰ which Clune locates as 'near a spring that flowed downhill to the Tank Stream',

¹⁵⁷This is confirmed by Palmer's letter to Lindsey of 15 September 1795 and by Collins's entry for August, 1795, p. 424, which notes that Boston was given seven men and 'an eligible spot at Bennilong Point', but had 'only produced three or four bushels of salt in more than as many weeks'.

¹⁵⁸HRA I, p. 500. Three months before, Paterson had written to Dundas, 'Our wheat harvest did not prove very abundant, but I have the satisfaction to say that the Indian corn has every appearance of being very productive' (21 March 1795, HRA I, p. 489). The failure of the wheat crop was in contrast to the success reported to Dundas by Grose on 10 December 1794 (HRA I, p. 484). Barley, the usual grain for beer, was grown in very small quantities in the colony.

¹⁵⁹Thomas Muir Papers, ML, MSS 948, p. 97.

¹⁶⁰Collins [1798, p. 399].

'now the west side of O'Connell Street'¹⁶¹ and which was then called South Street. Palmer wrote in 1799 that 'Mr and Mrs Boston and two children, Ellis and myself have always lived together'.¹⁶² Though no doubt crowded, this site seems to meet the requirements of security, proximity to the market, and a ready source of water: the Martyrs's houses were only about 100 metres from the main tank and its well on the Tank Stream, completed in May 1792.¹⁶³ Basic materials were also close to hand. In the celebrated incident over Boston's pig, which took place nearby, Boston was accused of leaving the field of action 'in quest of such hostile weapons as sugar canes and stalks of Indian Corn'.¹⁶⁴ It was an accusation which he strenuously denied, but which provides us with evidence of the ready availability of two of the principal ingredients of Boston & Co.'s beer, sugar being a likely adjunct (see below and Chapter 6).¹⁶⁵

The other possible sites seem unlikely. Shortly after arriving in the colony, Palmer had purchased 100 acres of land in the district of Bulanaming, from Edward Laing, part of which is today occupied by Newington College, and also been given four acres and a home by Surgeon John White, with whom Palmer had

¹⁶¹Clune, *Martyrs*, p. 75; see also Palmer to the Rev. Joyce, 15 December 1794, HRNSW II, p. 870. Earnshaw, *Thomas Muir*, p. 17, places the huts 'about midway along the present day O'Connell Street'. Grimes's 1800 Plan of Sydney (in HRNSW V, p. 838) has three allotments without names occupying about a third of the block between O'Connell and Spring streets, running north from about midway along O'Connell Street.

¹⁶²Letter to J. T. Rutt, 10 September 1799, in Clune, *Martyrs*, p. 137.

¹⁶³Andrew Houison, 'The Tank Stream', *Journal and Proceedings of the Australian Historical Society*, vol. 1, 1901, p. 6. There was also a spring at the northern end of O'Connell Street (J. F. Campbell, 'The Valley of the Tank Stream', *Journal of the Royal Australian Historical Society*, vol. 10, 1924, p. 95).

¹⁶⁴John Boston's memorial to the court, 26 August 1796, HRA I p. 626.

¹⁶⁵The reporting of this case takes some 42 pages in the HRA, and occupied several days at trial over December 1795 and an appeal in January 1796. A bare recital of the facts is that on 29 October 1795, a private in the New South Wales Corps, on orders from the Quartermaster, Laycock, shot one of Boston's pigs which had strayed into Captain Foveaux's garden. Boston abused the private who struck Boston with his musket. Boston sued Laycock, the private and two onlookers, claiming damages of £500. Laycock and the private were ordered to pay £1 each. An appeal by the two was dismissed by Governor Hunter, who felt the original verdict lenient. For details of the incident, see Cobley, *Sydney Cove 1795-1800*, pp. 24-5; Clune, *Martyrs*, p. 92; Parsons, 'Pig'; and Boston vs Laycock, McKellar and others, HRA I, pp. 602-43. Foveaux and Laycock's lots were next to each other, about 100 metres from the Martyrs' huts, although on the other side of the Tank Stream.

very quickly formed a firm friendship.¹⁶⁶ It seems that Palmer's 100 acres adjoined farms held by Skirving and Muir totalling a further 120 or perhaps 145 acres.¹⁶⁷ But Palmer and Boston lived in town, and a country location offers no obvious benefits for brewing. Another possible site, quite close to their town house, is Boston's salt-making operation about half way along the east side of Sydney Cove.¹⁶⁸ But this small hut was exposed to the elements and was probably without fresh water. Their own house is by far the most likely place where their career as brewers began.

As Collins remarked, the success of Boston's peculiar bitter led him to erect a more substantial building for this purpose. It is most likely that this was an extension of the brewery in O'Connell Street. Later, Boston & Co.'s brewing business expanded still further with the construction in 1797 of a windmill. This mill was later knocked down to make way for the Government House stables and quarters, begun in 1817, which were occupied by the Conservatorium of Music in 1915. Boston's mill is explicitly identified in Grimes's map of 1800, but it is also depicted in a view of Sydney Cove from 1797.¹⁶⁹ As well as being by itself a profitable venture, milling complemented brewing. In supplying flour to bakers, Boston & Co. probably sold yeast retained from brewing as well. The mill was also no doubt a significant addition to the brewing operation. Malt for brewing is milled to make grist, to which is added hot water during the process known as

¹⁶⁶Palmer to Joyce, 15 December, 1794, HRNSW II, p. 871; Clune, *Martyrs*, pp. 77-8. The 100 acres was granted to Laing on 3 October 1794 (Ryan, *Grants*, p. 26). It appears still under Laing's name in the 1796 plan of the settlement at the front of HRNSW III, but had been bought by Palmer on 11 December 1794 for £84 and was subsequently sold by Palmer on 17 March 1800 for £90 (Register of Assignments to December 1825, Book 4, p. 10, no. 282, LTO). Ryan, *Grants*, p. 218, has White's grant as 2 acres just out of town.

¹⁶⁷James Scott, 'The Scottish Martyrs' Farms', *Journal and Proceedings of the Royal Australian Historical Society*, vol. 46, part 3, 1960, pp. 166-7.

¹⁶⁸The salt house is shown in Grimes's 1800 Map of Sydney, HRNSW V, p. 838 and in a drawing c. 1804 reproduced in Tim McCormick et al, *First Views of Australia 1788-1825* (David Ell Press/Longueville Publications, Sydney, 1987), p. 114.

¹⁶⁹Norman Selfe, 'Some Notes on the Sydney Windmills', *Journal of the Australian Historical Society*, vol. 1, 1902-3, pp. 101-3, 105. The view is printed in HRNSW VI, opposite p. 822. To mark the spot, a plaque has been placed by the Royal Australian Historical Society near the Rose Garden gate in the Royal Botanic Gardens, beneath the statue of a boy with two hunting dogs.

mashing. Both malting and mashing require considerable amounts of water and Boston & Co.'s mill was about 450 metres up a quite steep hill from O'Connell Street, well away from water. It seems most likely that grain was malted in the O'Connell Street premises, carted up the hill to be milled, and then carted back down the hill for mashing and the subsequent parts of the brewing process (for which, see Appendix 1).

While they were not Australia's first brewers, it was a remarkable achievement for Boston, Palmer and Ellis to brew beer at all in 1795, given that they had neither hops nor barley. Despite this obstacle, Boston and Co.'s brewery proved a success and was undoubtedly the largest built in the colony until the government brewery which began operations in 1804.

The Shape of Things to Come

Apart from being businessmen with an interest in beer, Squire and the three partners of Boston & Co. were very different people. Squire arrived a convict. Boston and Ellis were free men, while the political exile, Palmer, enjoyed most of the privileges of the free while in Sydney. The sentiments expressed at Squire's death make it clear that he was an industrious, philanthropic and well-regarded man. We know little of Ellis, other than his faithfulness to Palmer. Boston was quarrelsome, though not without some justification. Palmer may have held to high political ideals but his personal records reveal him to have been rather hypocritical and devious.¹⁷⁰ Their greatly different circumstances and personalities account for their very different legacies to the Australian brewing industry. Squire was to become the most significant brewer and hop grower of his

¹⁷⁰As an example of this, Palmer made much in his letters of the pernicious trade in spirits and levelled scathing criticism against Governor Hunter in this regard. Yet, Palmer and his associates were quite large traders in spirits themselves and also operated an illicit still. See Palmer to J. T. Rutt, 10 September 1799, in Clune, *Martyrs*, p. 137; Hunter to Portland, 15 November 1799, HRA II, p. 398; Maurice Margarot's Journal, excerpted and commented upon, in *Copies of Portions of Two Scrapbooks of G. W. Rusden's* in Trinity College, Melbourne, ML, B1374, p. 30 (excerpt dated 5-8 October 1800).

time. At his death in 1822, his brewery produced about 100,000 gallons a year, and was surrounded by seven to eight acres of successful hop vines. A son and then a son-in-law carried on the brewery into the 1830s.

Boston & Co.'s brewery, on the other hand, was only one part of a remarkable but short-lived business partnership, which was in turn only a part of lives made tumultuous by political activism and personal disputes. When Palmer's exile was over, he, Boston and Ellis left for England in a Spanish prize ship – *El Plumier* – which they had bought and fitted out. It was a disastrous voyage.¹⁷¹ The partners left Sydney on 5 January 1801, and eventually made their way to Guam, where Palmer died in 1802. Boston and Ellis established themselves in Manila where they operated a distillery. It is probably there that Ellis died in about 1803, along with Boston's wife and children. Boston then returned to Sydney with a cargo of spirits and sugar, before being killed, feared eaten, in a voyage to Tonga in 1804. It seems that Boston & Co.'s brewing and other manufacturing activities in Sydney ceased when the three partners left Sydney and they were not revived by Boston during his brief return. The 1958 edition of the *Australian Encyclopaedia* says that the brewery 'failed after a short time'. This is unfair. A more accurate description of events would be that it began in 1795, prospered and expanded through 1796 and 1797, and was wound up prior to 1801 for personal reasons. Whether the brewery was put to use by others is not known, but Boston & Co.'s mill passed to the Commissary, John Palmer, who was no relation of the former owner.¹⁷²

The experiences of Squire and Boston & Co. in the 1790s pointed the way for much of the development of the brewing industry over the following two decades. Boston Co. pioneered the use of maize, which was plentiful, cheap and

¹⁷¹The voyage is described in a number of sources, with some disagreement on details. A reasonably accurate account is in Clune, *Martyrs*, chapters 18 and 19.

¹⁷²James Meehan's 1807 map of Sydney shows Boston's mill (no longer called that) on John Palmer's lease, along with a new mill to the south, see HRNSW VI, p. 367. Palmer took up his lease of 3 acres 32 rods on 31 March 1802 (Ryan, *Grants*, p. 284).

more easily managed during malting and brewing than colonial barley. It was a lesson which Squire also learned. While he brewed at times with barley and also with wheat, maize provided the bulk of his fermentables, to which he added sugar.¹⁷³ The practice was resisted by some brewers and opposed by some critics, but it worked, and the resulting colonial style of ale proved popular with consumers. On the other hand, Boston & Co.'s experimentation with a substitute for hops could only be a temporary measure. Other brewers would try to find alternatives from among local and exotic plants, but without success. Similarly, the occasional fortuitous arrival of hops from England, which had given a boost to Squire's early efforts, could not be the basis for an industry. Most of the major brewers from 1800 to 1820 would devote considerable energy to developing local hop growing, but the larger part of hop supply would come from increasingly regular imports. The difficulties in securing ingredients and of brewing under difficult circumstances are discussed in detail in Chapter 6.

Squire and Boston & Co. were commercial brewers. It is likely that already the larger part of beer production was for sale rather than private consumption. And Boston & Co.'s relationship with liquor retailers is the barest hint of later developments in the tying of public houses, discussed in Chapter 5. But, above all, both brewers had shown that commercial brewing in the colony was possible. The future of brewing belonged to large, commercial brewers, but not before the government had shown itself to be unsuited to the task.

¹⁷³Ritchie, *Oral Evidence*, pp. 116-7.

Chapter 3

The Government Brewery: 1801-1810

Philip Gidley King, who assumed command of New South Wales in September 1800 from Governor Hunter, was particularly concerned about the consumption of spirits in the colony. He was not alone in viewing this as a problem of the first order. William Paterson, a former administrator of the colony, expressed his joy at King's arrival, for 'the Government was getting every day into greater confusion in consequence of the immense quantities of spirits that got amongst the lower order of settlers and convicts'.¹⁷⁴ As discussed in Chapter 1, alcohol imports in 1800 were abnormally high and quickly glutted the market leading to a dramatic reduction in imports by 1802. Moreover, alcohol consumption per adult before and during King's governorship was lower in the colony than in Britain. Neither fact altered King's view that the consumption of alcohol was a grave problem requiring the closest attention of government.

King's obsession with drink reflects both his particular view about the character of many of the colony's inhabitants and a general view which was prevalent in Britain: public order, moral standards and the general condition of the population, and of the poorer part in particular, would be much improved if alcohol consumption, and spirits consumption in particular, could be greatly reduced. It may have been the preponderance of spirits drinking in the colony, then, rather than the amount of alcohol consumed, which so worried King. The British temperance movement in the eighteenth and early nineteenth centuries was very often a beer movement. William Hogarth's famous depictions of Gin Lane and Beer Street contrasted the industry, good order and good health of the latter with the destruction, depravity and premature death of the former.¹⁷⁵ Agrarian

¹⁷⁴Paterson to Banks, 8 October 1800, HRNSW IV, p. 228.

¹⁷⁵These 1751 cartoons are frequently reproduced, for example, opposite pp. 63 and 78 in F. W. Hackwood's *Inns, Ales and Drinking Customs of Old England* [late 19th century] Bracken Books, London, 1987. Interestingly, 1751 was the last of nearly twenty years of high spirits consumption

and nationalist sentiments were welded to this belief in the benignancy of beer. The yeoman image of the independent Briton on his farm, drinking a beverage worthy of free men, became part of a political philosophy in the hands of William Cobbett, who was against both 'tea slops' and large commercial breweries.¹⁷⁶ A more general self-image of the sturdy British subject, the John Bull character, was encapsulated in Sydney Smith's question: 'What two ideas are more inseparable than Beer and Britannia?'.¹⁷⁷ These sentiments carried to New South Wales, where the Reverend Thomas Fyshe Palmer contrasted the 'honest livelihood' of brewing with the 'pernicious use of spirits'.¹⁷⁸ Praise of beer was not universal. Some of Palmer's supporters in Britain were scandalised by suggestions that he was involved in brewing.¹⁷⁹ But these refined sensibilities were outnumbered by the consciously robust proponents of the moral, political and cultural virtues of beer.

In King's campaign against spirits, both the stick and the carrot were used. The stick was the turning back of imports and seeking out of illicit distillers. The carrot was the promotion of beer drinking on a large scale as an alternative to drinking spirits. An immediate step was to import beer in relatively large quantities on the government account and to encourage the private shipments of beer which were becoming more regular by the beginning of the nineteenth

in England and Wales. Consumption fell significantly in 1752 and reached bottom in 1784 (Mitchell and Deane, *Historical Statistics*, p. 255).

¹⁷⁶For a quick but just appreciation of Cobbett, see D. C. Somervell's beautifully written *English Thought in the Nineteenth Century* [1929], David McKay, New York, 1965, chapter I (III). The temperance movement was already turning towards teetotalism when Cobbett died in 1835. In 1832, the year of the Reform Act with which Cobbett's name is so closely linked, 'a number of gentlemen of Preston formed themselves into a society pledged to abstain entirely from intoxicating liquors' (Hackwood, *Inns*, p. 162).

¹⁷⁷'Botany Bay' [*Edinburgh Review*, February 1823] In *Essays*, Routledge, London, not dated, p. 387.

¹⁷⁸Thomas Fyshe Palmer Papers, ML, MSS B1666, pp. 11-12.

¹⁷⁹'I am sorry to acquaint you that I this day was informed by a friend... that Mr Palmer not only was a great Brewer, but also retailed the liquor himself not in a very creditable way' (Rev. Lindsey to Millar, 16 June 1801, Robert Millar Papers, ML, FM 4/229). Presumably they would have been more scandalized still by revelations of Palmer's enthusiastic and hypocritical part in spirits distilling and retailing, for which see Governor Hunter's complaint about the poteen still of Palmer and his associates (15 November 1799, HRA II, p. 398).

century. The desired object however was large scale local production. As discussed in Chapter 2, brewing on a small scale had begun in the colony as early as 1791 and in 1793 James Squire produced several thousand gallons of beer from imported hops and malt. By 1796, Boston & Co. was operating a substantial and successful brewery in a building erected at some expense for the purpose. But when the three partners of Boston & Co. left for England in January 1801, it is likely that their brewery closed down, leaving Squire as the only brewer of any note in the colony.

It was in these circumstances that King launched an ambitious plan in late 1801 to build a government brewery. The project – one of the largest undertakings in the first decades of British settlement – was completed in late 1804. By early 1806, it was a conspicuous failure, prompting King to lease the premises. It has been argued that the brewery suffered from the two fundamental problems which retarded development of the brewing industry in Australia until the 1820s: problems in the supply of inputs, in particular, barley, limiting the supply of beer, and the colonists' thirst for spirits limiting the demand for beer.¹⁸⁰ This is at odds with the evidence, which shows a marked improvement in the brewery's performance once it was leased. If any conclusion is to be drawn from the case of the government brewery, it is not the alcoholism of the colonists, or even the impediments to brewing on any scale in early Australia, but the difficulty the colonial government had in running a business well.

The Government Acts

Exactly when King suggested the idea of a government brewery to the authorities in England is not known. He had shown considerable enthusiasm for Joseph Banks's attempt to send hop plants on the *Porpoise*, the ship which was to convey King to Sydney in late 1798. The *Porpoise* proved unseaworthy and was

¹⁸⁰Hainsworth, *Sydney Traders*, pp. 188-9.

condemned. A second ship, renamed the *Porpoise*, finally arrived in Sydney in November 1800, by which time the hop and other valuable plants were lost. King meanwhile had transferred to the whaler *Speedy*, arriving in New South Wales on 15 April 1800. Beer and hops were still on King's mind over a year later, when, in a letter to the Home Secretary, the Duke of Portland, he expressed the hope that with the establishment of whaling it would be in 'the interest of the owners to send a quantity of porter, which they can do at a cheap rate'. Brewing too he hoped would 'become common', when 'the inundation of spirits is stopped', though it had 'been much retarded for the want of hops, not a single plant having ever reached this country'.¹⁸¹ In correspondence to Banks in August, King asked if Banks would make another attempt to send hop plants to the colony.¹⁸² But there was no suggestion by King in any of these letters that the government establish a brewery.

The idea appears then to have been floated sometime after August 1801.¹⁸³ Lord Hobart, who had replaced Portland, wrote to King on 29 August 1802:

I highly approve of your continued exertions to prevent the improper importation of spirits. The introduction of beer into general use among the inhabitants would certainly tend in a great degree to lessen the consumption of spirituous liquors. I have, therefore, in conformity to your suggestion, taken measures for furnishing the colony by the present opportunity with a supply of ten tons of porter, six bags of hops, and two complete sets of brewing utensils. I have also recommended to the merchants concerned in the New South Wales fishery to send out by their

¹⁸¹8 July 1801, HRA III, p. 111. These points were repeated in a letter to Portland dated 21 August 1801 (HRA III, p. 120).

¹⁸²21 and 25 August 1801, HRNSW IV, pp. 360 and 514.

¹⁸³The idea had occurred to others in the colony. Maurice Margarot had written in his journal, c. 1800-1, 'it would be very easy to establish a government brewery. Government to take wheat, barley, and pigs in payment' (Maurice Margarot's Journal, excerpted and commented upon, in Copies of Portions of Two Scrapbooks of G. W. Rusden's in Trinity College, Melbourne, ML, B1374, p. 32).

ships a further supply of porter, and I shall take care that a quantity of hop plants are sent thither at a proper season of the year.¹⁸⁴

Invoices dated 10 August and 30 July of that year recorded the despatch in the *Glatton* of six bags of hops, packed in six butts, weighing 1,818 lbs in total, and 10 tuns, equal to 2,520 gallons, of brown stout from the great brewing house of Meux Reid.¹⁸⁵ The hops (and an unknown quantity of soap), and the beer, cost £78 9s 10d and £189 respectively.¹⁸⁶ In Britain, a large brewer like Barclay Perkins was paying about £6 3s a bag, suggesting the hops cost the government about £40.¹⁸⁷ A part of the hops – 142 lbs – was sold by King to a private brewer at a 30 per cent mark-up, giving a sale price of about £4. King described the buyer as ‘a Man who has always brewed on his own Account’, and later as ‘a settler who has long brewed in small quantities’. It sounds very much like Squire.¹⁸⁸ The porter was sold by the Commissary at 50 per cent on the prime cost, giving a price of £9.9s per 84 gallon puncheon or 2s 3d a gallon.¹⁸⁹

With regard to the brewing equipment, historians have taken the letter of 29 August 1802 at its word and concluded that two sets of utensils were sent at the same time as the beer and hops. Invoices exist for one set of utensils to be sent by the *Cato* at a cost of £179 13s 10d.¹⁹⁰ The *Glatton*, which sailed in September

¹⁸⁴HRA III, p. 562. Hobart was Secretary of State for War and the Colonies, not Home Secretary, as Portland had been. Responsibility for the colonies had been transferred from the Home Office in 1801.

¹⁸⁵For the hops, see Victualling Board to the Governor of New South Wales, 10 August 1802, HRA III, p. 560, and also Hobart to King, 24 February 1803, HRA IV, p. 18; for the brown stout, see Transport Commissioners to Governor King, 30 July 1802, HRA III, p. 532. The stout was despatched in 30 puncheons of 84 gallons each. A bag of hops weighs 280 lbs. Six bags would weigh 1,680 lbs, not 1,818 lbs.

¹⁸⁶Hobart to King, 24 February 1803, HRA IV, p. 31; King to Hobart, 1 March 1804, HRA IV, p. 532.

¹⁸⁷Mathias, *Brewing Industry*, p. 550.

¹⁸⁸King to Hobart, 7 August 1803, HRA IV, p. 311; King to Hobart, 1 March 1804, HRA IV, p. 460; Victualling Board to the Governor of New South Wales, 10 August 1802, HRA III, p. 560.

¹⁸⁹Government and General Order, 16 March 1803, HRA IV, p. 336.

¹⁹⁰Transport Commissioners to Governor King, 12 October 1802, HRA III, p. 581; Hobart to King, 24 February 1803, HRA IV, pp. 30-1.

1802, did not carry any brewing utensils. This was confirmed by King on 9 May 1803 when he noted that

Another set of Brewing utensils and an annual supply of Slops will be necessary, the first for Sydney and the latter for use,— We are commencing with fixing the material brought by the Cato in a large Govt building at Parramatta [in margin: Is going on very well] — which I have no doubt will succeed and greatly prevent the Importation and use of Spirits.¹⁹¹

Meanwhile, the question of the inputs had continued to exercise the minds of the English officials and King. Hobart wrote to King on 24 February 1803:

As the hops were of the best quality, and were packed with great care, I hope they will reach you in good condition, and enable you to afford occasionally a wholesome beverage to the civil and military servants of the Crown, to the settlers, and to the unfortunate people who are expiating their crimes under the sentence of the law. A further supply of hops shall be sent to you hereafter, if I find that those sent by the Glatton reach you in good order, and it shall appear that your crops of barley are such as to enable you to make a sufficient quantity of malt.¹⁹²

In a separate despatch also dated 24 February 1803, Hobart hoped that ‘the preparations made for supplying you with the hop plant will enable me to forward that useful vegetable to New South Wales in the ensuing autumn’.¹⁹³

¹⁹¹King to Under-Secretary Sullivan, HRA IV, p. 246.

¹⁹²HRA IV, p. 18.

¹⁹³HRA IV, p. 37.

Hobart felt that the supply of hops and hop plants was the priority; barley was not a problem. King, however, was not so sanguine. On 9 May 1803, he wrote to Hobart that

The hops will be very acceptable, as well as the utensils for brewing; and as soon as the Glatton is dispatched I shall turn my attention to finding a proper person to entrust with that material object, which will certainly increase when once commenced. As at length a few hops are growing from some seeds brought by an individual about four months ago, and barley grows exceedingly well. The only kind we have is little better than husk. About 20 bushels of good full barley, sent by a whaler, would be very acceptable, as would be some hop plants.¹⁹⁴

King's view of the barley is somewhat confusing, but in two enclosures to a separate letter to Hobart dated the same day, he makes it clear that the barley in the colony is 'A bad sort, not much in Cultivation', and requests three types of barley in a list of seeds 'that would be of Utility in the Colony'.¹⁹⁵ In response, 20 bushels of seed barley were shipped on board the *Experiment* around 2 January 1804.¹⁹⁶ The problem of an inadequate supply of barley would become greater still. By 1 March 1804, King was reflecting on the poor harvest due to 'rust and smut', and suggesting that 'two hundred bushels of the best malting barley for seed would greatly promote your Lordship's beneficial views respecting our brewing'.¹⁹⁷

¹⁹⁴King to Hobart, 9 May 1803, HRA IV, p. 79.

¹⁹⁵HRA IV, pp. 234 and 241. In the same enclosures, King remarks that hops were 'Scarce', 'But appear to do well'. Hop seeds were requested (pp. 239 and 241).

¹⁹⁶Transport Commissioners to King, 2 January 1804, HRA IV, p. 452. Some of this seems to have gone missing on the voyage: 'By the Experiment I received 15 bushels of barley', wrote King to Hobart, 14 August 1804 (HRA V, p. 11).

¹⁹⁷King to Hobart, 1 March 1804, HRA IV, p. 492.

While waiting for more supplies, King had continued to devote himself to the construction of the brewery and finding a suitable man to run it.

Soon after the *Glatton* had sailed a commencement was made in erecting a Public Brewery at Parramatta as being the most central and convenient situation, but as it requires some time and labour to erect the Malt Kiln Houses etc no time is lost in completing it, ...when this desirable work is compleated, for which purpose much Barley has been sowed this year I hope a final Blow will be given to the desire of obtaining as well as the importation of Spirits the Yearly difference of which your Lordship will observe by the enclosed return.¹⁹⁸

Completion of the brewery was no doubt interrupted by the theft on 16 July 1803 of 'the Iron Bars made up in the Mason Work for the Malt Kiln'. King offered a £30 reward, and an unspecified 'further Desirable Encouragement, To any one Prosecuting to Conviction on or before the 30th Instant'.¹⁹⁹

Whether the thieves were caught or the iron bars recovered is not known, but work went on. By mid-September, King thought that construction was nearly completed, and turned his attention again to the matter of hops.

The brew-house and implements are now nearly fixed, and altho' we are in want of a proper person to conduct that business, yet every exertion shall be made to brew beer, which will be of infinite advantage to the inhabitants; and as there is no doubt of our fully succeeding in this important benefit, I beg to recommend that hops may be sent out by every conveyance, if it is only a pocket by each ship. The plant is growing very luxuriantly from some seed brought by accident last year, and there is no

¹⁹⁸King to Hobart, 7 August 1803, HRA IV, p. 311. The *Glatton* left Sydney on 17 May 1803.

¹⁹⁹SG, 24 July 1803.

doubt will in time do well, but as not more than ten plants were raised, many years must elapse before they can be brought into use.²⁰⁰

Despite King's optimism it was over five months before this work was completed and the first samples made. The delay had not dampened his enthusiasm. The brewing utensils, he reported on 1 March 1804,

are all fixed at Parramatta in a building appropriated for that purpose, with a kiln and every other requisite for malting barley and brewing under the same roof... A trial has been made in which we have succeeded in making a small quantity to begin with.

He was confident that they would be able to brew on 'a very large scale. That which is made is very good, altho' we have no one proficient in brewing to conduct it'. He continued with the now familiar requests 'for some good seed barley and more hops', although he expected that their indifferent barley 'would enable us to continue brewing'. He also wondered whether

a thousand well established hop plants could be put on board any whaler coming direct. There are now about forty thriving hop plants growing from a quantity of seed brought by an officer in 1802, which are taken much care of.²⁰¹

²⁰⁰King to Hobart, 17 September 1803, HRA IV, p. 392. By 'fixed', King means 'fixed in place', not 'repaired'.

²⁰¹King to Hobart, HRA IV, p. 460. By 'appropriated for that purpose', King means 'devoted to that purpose' rather than 'taken over for that purpose'. King's correspondence makes it clear that the brewery was in a building built for the purpose and not in an existing building. A second letter to Hobart written on 1 March 1804 also refers to the brewery (HRA IV, p. 486). A third letter dated 1 April repeats all of the information and requests 'good iced barley' and '1 or 2,000 well established Hops plants' (King to Sullivan, HRA IV, p. 607).

The installation and trial of the equipment and some progress in the supply of the two main ingredients set King's mind to expanding the government's involvement in brewing. In 1802 and 1803, it had been envisaged by both King and the authorities in England that two sets of utensils would be sent in order to establish breweries at Sydney and Parramatta. Confident of the success of the Parramatta brewery, King now requested two more sets of utensils, one for Sydney, and one for Norfolk Island.²⁰²

The lack of a proficient brewer was solved a fortnight later, when King wrote to Sullivan that 'agreeable to my request Lieut. Govr Collins has lent me a man who is a most excellent Brewer – I have sent him to Parramatta where everything is prepared for his making a commencement'.²⁰³ Reflecting his constant concern at the supply of hops, King remarked that this man 'brought up a quantity of roots and leaves, of which he tells me there is a very great abundance growing about the place Col. Collins is settled at – He says it is a very good substitute for Hops'. King proposed trialling it and also sent samples with the letter, for testing by Joseph Banks, some of the botanists in the colony speculating that it may have been a type of Columba root or of Ginseng.²⁰⁴

The new man was Thomas Rushton, who would be a major figure in the Australian brewing industry until his death in 1822. Unfortunately the arrival of a professional brewer meant that 'most of the Casks will be altered to meet his wishes and plans, which are calculated for Brewing on a larger scale than were wanted before his arrival admitted of'.²⁰⁵ This was only the beginning of

²⁰²HRA IV, p. 460. Six weeks earlier, a general order dated 18 January had announced that King had 'applied for brewing Materials to be sent from England to Norfolk Island' (SG, 22 January 1804).

²⁰³15 March 1804, HRA IV, p. 602. This man had arrived on the *Lady Nelson* the day before. See also King to Sullivan, 1 April 1804, HRA IV, p. 607. David Collins had sent King a list of trades and occupations of the convicts in his charge in November 1803, in which are identified a brewer and a 'malter' (HRA ser. III, I, p. 32). Collins was at the time camped on Port Phillip (modern Melbourne) before moving to the more hospitable site of Hobart in Tasmania.

²⁰⁴Banks was less than impressed with the specimen sent to him (Banks to King, 29 August 1804, HRNSW V, p. 458). See Chapter 6.

²⁰⁵King to Sullivan, 1 April 1804, HRA IV, p. 607.

Rushton's demands. Three weeks later, King was complaining that 'he has put us back by requiring many, and great alterations to what we had begun and indeed finished as we thought'. Nevertheless, King was clearly impressed by Rushton, 'who appears to be as much a Master of the business he professes, as his appearance is in his favour', and allowed him a free rein.²⁰⁶ By August he was happy that the delay had been worth it. Rushton,

being a complete brewer and one who had formerly conducted a large brewery of his own in England; he declared his inability to brew any considerable quantity of beer with the kiln and other works prepared by the only person we could find that had any knowledge of that work. As it was a principal object to brew as much beer as possible, every thing was recommenced, and I am now happy to inform your Lordship that all these works will in the course of a fortnight be completed on a large scale, and which will admit of 3,600 barrels of beer being brewed weekly. Four hundred bushels of barley are malted, and the kiln is equal to any work of the kind in England.²⁰⁷

The predicted quantity is clearly a mistake; it would have made the Sydney brewery as big as the largest porter breweries of London. King presumably meant gallons not barrels, and even then, he may have been exaggerating. *The Sydney Gazette* of 21 October reported that the brewery was 'capable of brewing 1800 gallons a week'. Further expansion of the brewery was planned. The same *Gazette* report continued, 'when some additional working tubs are made, upwards of 3000 gallons can be brewed weekly'. Two months later,

²⁰⁶King to Collins, 20 April 1804, ML, A2015, p. 385.

²⁰⁷King to Hobart, 14 August 1804, HRA V, pp. 10-11. See also pp. 45-6, which describe the 'total alteration in the Works', which is to be 'ready for work on the 21st of this Month'. It is quite possible that 'the only person we could find' to do the work before Rushton arrived was James Squire, who would also have conducted the trial-run earlier in the year.

King was again doubling this reported output. 'The malt kiln, size of the copper, brew-house, and every requisite is sufficient to brew six thousand gallons of beer weekly'.²⁰⁸ Even using the *Gazette*'s more conservative estimate of 3,000 gallons, by the standards of Australian breweries for at least the next thirty years, the government brewery was very large. Rushton's appointment had transformed the scale of the project. His initial requests for larger casks had been followed by a complete reconstruction of the brewery with a larger kiln and larger mash tuns. The number of convicts employed at the brewery rose with this increase in capacity, from three in March to six in September (see Table 3.1). The brewery was probably the most technically demanding project yet undertaken in the young colony and a significant item in the government's finances. The *Gazette* of 12 August 1804 reported that 'A quantity of sheet lead (the first that has been run in the Colony), has been cast for the cisterns intended for the Government Brewery at Parramatta'. The estimated cost of the premises and utensils in early 1806 was £1568 3s to which can be added the cost of hops and grain.²⁰⁹ To put this into context, the total of Treasury bills drawn by King in 1803 and 1804 – the years of the brewery's construction – was £29,820.²¹⁰

The Government Fails

The brewery finally commenced full production on 15 September 1804, and a Government Order on 25 September announced that beer was for sale.²¹¹ But while King wrote enthusiastically about its operation in the first months after opening, the brewery did not produce at anywhere near its capacity. After all the effort at building the brewery and installing the equipment, securing the inputs

²⁰⁸King to Hobart, 20 December 1804, HRA V, p. 170.

²⁰⁹HRA V, p. 654. Some further alterations had been made to the brewery during 1805 (HRA V, p. 665).

²¹⁰G. J. Abbott, 'Governor King's Administration', in G. J. Abbott and N. B. Nairn (eds), *Economic Growth of Australia 1788-1821*, Melbourne University Press, 1969, p. 164.

²¹¹HRA V, pp. 272-3. The order was printed in SG, 30 September 1804.

and the services of a professional brewer, and increasing its capacity, the brewery produced only 4,247 gallons from 7 batches in its first 12 weeks.²¹² Weekly output, at 354 gallons a week, was nothing like the 6,000 gallon weekly capacity of which King boasted or even the *Gazette*'s more sober figure of 3,000 gallons. After a poor start, things got worse. Total production for the next 29 weeks was 6,888 gallons or an average of only 238 gallons a week.²¹³ This included a cessation of brewing in January 1805 and for the last seven weeks to 30 June 1805. The brewery may have resumed operations in July (see Table 3.2) before ending with a whimper later in the year. In September the brewery still had five convict employees, but this had been reduced to one by December. Presumably this lone employee was Rushton, kept on to maintain the premises while Governor King pondered what to do next.

The most obvious explanation for the brewery's low output is difficulty in securing necessary materials. The brewery produced four batches ranging from 540 to 612 gallons in each of the first four weeks from 15 September to 6 October, presumably from grain held in the government store from the 1803 harvest. Only three batches were brewed over the next two months: 612 gallons on 6 October, 573 gallons on 24 November and 720 gallons on 9 December. This record does fit with the documentary evidence on the failure of the barley crop at this time.

Barley was to be purchased for the brewery by the Commissary, John Palmer. On 30 September he announced:

²¹²An Account of Beer Brewed at Parramatta between 15th September and 9th December, HRA V, p. 176. The total brewed is 45 gallons less than the amount distributed, lost in issue and remaining on hand, suggesting that there was a small amount of beer in stock made prior to its official commencement. The output for the first four batches is confirmed in SG, 21 October 1804.

²¹³Account of Beer Brewed at Parramatta between the 10th December 1804 and 30th June 1805, AONSW, Col. Sec. 4/1719, p. 209 (6041, p. 241).

From those who are not indebted to the Stores, and who are growing Barley, I shall be ready to receive sealed Tenders for the lowest Price, to be laid before the Governor, on or before the 10th Day of Next Month.²¹⁴

The Commissariat's position as creditor of a number of farmers was also to be exploited. 'It is expected that... those who are indebted to the Store, and have Barley growing, do make Payment thereof as soon as their Crops are in, for the purpose of continuing the Brewery.' By 21 October, the *Gazette* was predicting that the barley harvest in the Hawkesbury would 'be small in comparison to that of former years, owing to the rains and very mild weather in the winter and spring bringing that grain too far forward'. It offered some exhortation and mild encouragement. 'The raising and supplying of barley will depend on the settlers; in exchange for which they are assured of beer.' The administration, however, took more concerted action to secure what little of the barley crop remained. A government order declared that

The Magistrates and Constables in each District being furnished with a List of those Cultivators who have grown Barley, also the Sums they are respectively indebted to the Crown, It is required that each Person do pay as much of their respective Debts as they can in that Grain; as well for the purpose of lessening the Debts due to the Crown, as for keeping a Supply of Barley for making Beer.²¹⁵

The prices to be given per bushel for those repaying debt were 5s for English barley and 4s 6d for Cape barley. Those who paid off their debts in barley could sell any surplus at 4s 3d and 3s 9d respectively. The offer was clearly an attractive one which led to an unfortunate result, and a new government order.

²¹⁴SG, 30 September 1804; repeated 7 October.

²¹⁵Dated 3 November, HRA V, p. 276; printed in SG, 4 November 1804.

His Excellency the Governor having been informed that some of the Settlers in the district of Hawkesbury are reaping their Barley before it is ripe with a view of putting the same into the Store, which will evidently defeat the intention of supplying the Inhabitants with beer, as malt cannot be made from Barley thus reaped. It is therefore ordered that no Barley be received into the store without a sample has been first approved of by the Superintendant of the Brewery at Parramatta; and in case the quantity turned in should not appear equal in quality to the Sample, or that it does not vegetate when Malted, One half of such Barley will be forfeited for the imposition.²¹⁶

These problems in securing barley had forced Rushton to use an alternative grain. In his letter to Hobart of 20 December 1804, King regretted that

By this ship I should have done myself the honor of forwarding a sample of the beer, but that we have been obliged to use wheat lately instead of barley. As the latter grain is now coming in, I hope to send it by the next ship.²¹⁷

He remained hopeful that the barley crop would be of 'a sufficient quantity to go on with', however, the *Gazette* had already advised on 16 December that the barley crop had failed raising the prospect of 'a temporary impediment to the supply' of beer. Two brews of 557 and 584 gallons were produced on 24 and 28 December, but production ceased in January and was only fitful in February, with two brews of 606 and 324 gallons. Weekly production recommenced on 1 March

²¹⁶Dated 9 November, HRA V, pp. 276-7; printed in SG, 11 November 1804.

²¹⁷King to Hobart, 20 December 1804, HRA V, pp. 170-1. In a separate letter to Hobart of the same date, King claimed that there would not be the 'propensity' for spirits 'now the brewery is established and is improving' (HRA V, p. 200).

1805 and continued through to 13 May, when production ceased at least until 30 June. By August 1805 there were no bushels of barley in hand reported in the settlement.²¹⁸ The brewery closed sometime between September and December.

Rushton may also have had difficulty in using the small amounts of barley that were available, especially in summer. In 1820, Squire, by then long the colony's foremost brewer, still complained that 'Colonial Barley ripens irregularly, and in malting vegetates unequally, which is a great impediment'. He found that 10 bushels of local barley were the equivalent of 6 bushels of English barley or of 8 bushels of local maize or wheat.²¹⁹ He mainly brewed from maize, and sometimes from wheat. Squire's advertisements in the *Gazette* in 1804 for shelled corn and barley suggest that he was still using barley, but only in the cooler months, a practice supported by John Howe in 1820.²²⁰

Neither the shortage of barley nor difficulties in its use provide an adequate explanation for the low output and eventual closure of the government brewery. The obvious solution to both problems was to use the mainstay of private brewing: maize. That maize was easier to work with had been recognised by local brewers since the highly successful operation of Boston and Co. in the 1790s. It was also plentiful and cheaper, at a government store price of 4s a bushel.²²¹ Using Squire's figures, the cost of grain for a hogshead of beer made from barley would have been about one and half times the cost of grain for a hogshead of beer made from maize. An all-maize beer, usually made in the colony with the addition of cane sugar, would have been inferior to a conventional barley beer, but this would seem preferable to little or no beer.

More to the point, even if Rushton could not bring himself to use maize, he was prepared to brew with wheat. Indeed, it is possible that from the start it

²¹⁸Return of Agriculture and Livestock, August 1805 and August 1806, HRA V, p. 773.

²¹⁹Ritchie, Oral Evidence, pp. 116-7.

²²⁰SG, 1 July 1804, 4 November 1804; Evidence to J. T. Bigge, 15 December 1820, ML, BT 2, pp. 729, 732.

²²¹HRA II, p. 594; HRA V, p. 710.

had been envisaged that wheat would be used as well as barley. The advertisement announcing the brewery's commencement had noted that payment for the beer could be made in barley, wheat, hops, casks and iron hoops.²²² These were the materials necessary to keep the brewery going. Rushton was using wheat by late 1804 and may well have used it in 1805. While King was shy of sending a sample of wheat beer to Lord Hobart, wheat was successfully used by colonial brewers such as Squire. Most importantly, wheat was plentiful. There were 22,041 bushels in hand on 30 July 1803; 51,831 bushels on 30 July 1804; and 97,064 bushels on 23 March 1805.²²³ The heat of summer may explain the stoppage of production in January in 1805, and its fitfulness in February, but when regular production was resumed in March, with considerable supplies of wheat available, output remained low, at around 400 gallons a week, before falling away to nothing in May. This was not due to a lack of fermentable material.

Similarly, hops proved a difficulty, but cannot explain away the low output. King complained in December 1804 that 'unfortunately our hops will soon be expended, unless some arrive, as no substitute has yet been discovered. It may be some years before the few hop plants we possess will answer any essential purpose'.²²⁴ A further 566 lbs of hops had been received before the end of 1803, in addition to the 1,818 lbs sent on the *Glutton* in early September 1802.²²⁵ Less the 142 lbs supplied to a private brewer, this left 2,242 lbs available to the brewery, of which an unknown amount was used in trials before it began full production in September 1804. At a hopping rate of one ounce per gallon, the stock of hops would have been sufficient to make 35,000 gallons. Even at the rate

²²²HRA V, p. 273.

²²³Annual Returns, HRA V, pp. 308-9. Maize had increased even more, from 56,439 to 62,094 to 166,495 bushels. King reported two years' worth of wheat in stacks on 20 December 1804 (HRA V, p. 202).

²²⁴King to Hobart, 20 December 1804, HRA V, p. 170. The SG of 21 October 1804 spoke of 'the favourable appearance of the few hop plants, raised from seed brought in 1802'.

²²⁵King to Hobart 1 March 1804, HRA IV, p. 458-9. See also King to Sullivan, 1 April 1804, HRA IV, p. 606.

of two ounces per gallon, reported for some English porters, production should not have been constrained by the availability of hops.²²⁶ Perhaps King had bartered away more of the supply than he reported. On 1 March 1804 he remarked that after the disposal of the 142 lbs to a private brewer, 'The remainder I shall preserve for the purpose of brewing'.²²⁷ But the six month delay in commencement occasioned by the arrival of Rushton may have led King to make further sales to private brewers. Pilfering may have further depleted the stock of hops. Alternatively, by December 1804, all of the hops were over two years old, raising the possibility that some had perished. While they 'are not immediately perishable' and can be 'salable up to two years after harvest',²²⁸ 'Old hops, and in particular those exposed to the atmosphere for long periods, become brittle and lose their "bounce" and silky sheen',²²⁹ although presumably they would be acceptable to a brewer in difficult circumstances. Worse, if incorrectly stored, 'Oxidation and the action of microscopic bacteria can ruin the brewing value in a short space of time'.²³⁰

Whether further supplies of hops arrived in early 1805 is unknown, and irrelevant. Private brewers such as Boston and Co. had successfully met the deficiency in hops by using various substitutes: Rushton himself had arrived with a possible alternative. It is hard to see why the government brewery could not follow Boston and Co.'s example. Even more to the point, hops were arriving in speculative cargoes or could be ordered from England. When Rushton opened his own brewery at the Brickfields in 1808, he informed the public that as he had 'purchased all the hops imported in the Fox Brig [*sic*], and contracted for a continual supply, he will be enabled to continue the brewery without interruption'.²³¹ Why was the government brewery unable to do the same?

²²⁶For contemporary hopping rates, see Mathias, *Brewing Industry*, p. 17.

²²⁷HRA IV, p. 460.

²²⁸Pearce, *Hop Industry*, p. 4.

²²⁹D. Line, *The Big Book of Brewing*, The Amateur Winemaker, Hampshire, 1974, p. 71.

²³⁰Line, *Brewing*, p. 72.

²³¹SG, 19 June 1808.

Lack of inputs cannot explain the brewery's consistently low level of production and King himself had no doubt that the brewery's failure was due to something else. 'I found after a Year's Experience that Government was at a great loss and Expence in carrying on that Object, owing to the description of People it was necessary to employ.'²³² Rushton was apparently experienced and proved to be a successful brewer until his death in 1822.²³³ Subsequent events would suggest that he had the confidence of King, who appears to be talking about the convict labourers under Rushton's supervision. Among King's concerns must have been the 'loss by issue' item in the accounts, which may have included pilfering as well as mistakes. In the three months to 9 December 1804, this had been only 16 gallons. For the period 10 December 1804 to 30 June 1805, it was 730 gallons, one ninth of output.²³⁴ Some of the blame for this might rest with Rushton. A tantalizing suggestion that he was being deceived by his staff is contained in an undated letter from Rushton to King, in which he apologises for his errors 'not knowing the ways of the country and the disposition of the People'. He promises 'that his future conduct will be strictly consistent with your Excellency's most sanguine wishes'.²³⁵

In identifying the poor character of the convict labourers and, perhaps, the naivety or inattention of their convict supervisor, as the immediate cause of the failure of this major government venture, King no doubt sought to shift attention from his own role in the establishment and operation of the brewery. He also failed to explain why private businesses, including a large private brewery, were succeeding using convict labour and under the management of former convicts. The most obvious reason for the government brewery's failure was the lack of incentive to succeed among those who ran it. This point was implicitly recognised

²³² 15 March 1806, HRA V, p. 654.

²³³ SG, 22 November 1822.

²³⁴ An Account of Beer Brewed at Parramatta between 15th September and 9th December, HRA V, p. 176; Account of Beer Brewed at Parramatta between the 10th December 1804 and 30th June 1805, AONSW, Col. Sec. 4/1719, p. 209.

²³⁵ Letters Received by the Governor, 1804-6, AONSW, Col. Sec. 4/1720, p. 34.

in King's decision to lease the brewery to a private operator, and it was clearly demonstrated by the brewery's marked improvement in performance after it was leased.

The Government Reforms

King's report to Earl Camden was very matter of fact.

Being anxious to turn the Public Brewery to as good an account as possible in preventing thirst for Spirits which is so prevalent in this Colony, ... I therefore directed the Commissary to let it for two Years, as stated in the enclosed Agreement.²³⁶

Huntington writes that King was prompted to lease the brewery by a memorial from the magistrates and others, 'in order that there may be a reduction in the consumption of spirits'. The Commissary, John Palmer, was instructed to call for tenders for the lease, Thomas Rushton eventually coming forward to take up the offer.²³⁷ This brief account raises some questions. Did King have to be prompted to revive the idle brewery? Was leasing as a means to this end a novel idea for King? Was Rushton chosen from a field of tenderers or after no acceptable bids had been received?

While we know little of the tendering process, the terms of the contract signed by Rushton on 17 February 1806 are quite detailed.²³⁸ Rushton was 'To Brew strong Beer and Table Beer as per Sample given in' and to sell this beer at 1s and 6d per gallon respectively. He was 'to be accountable to the Commissary

²³⁶ 15 March 1806, HRA V, p. 654.

²³⁷ H. W. H. Huntington, 'History of the Beer and Cordial Industry of Australia', *The Australian Cordial-Maker*, 16 February 1903, p. 16. Unfortunately, Huntington gives no references and I have been unable to find this memorial.

²³⁸ Agreement for Renting the Public Brewery at Parramatta, HRA V, p. 668. The prices of the beer given here are from the Commissary's Notice of 1 March 1806, HRNSW VI, p. 22 (published in SG, 2 March 1806 and repeated 9 March).

for Casks at £2 10s per ton' and to pay rent of '200 Gallons of Strong Beer per month to the Governor or such person as he may appoint', for which he was to have 'free use and benefit of the Buildings and Brewery together with the Brewing Materials'. Large securities of £120 each were provided by Ralph Wilson and Rowland Hassall 'for the due performance of all' of the covenants of the agreement.

'Brewing Materials' appears to have included not just the existing stock of grain and hops in the brewery but further supplies to be delivered by the Commissariat. The second clause of the agreement stated that 'In Case it should be necessary to reduce the quantity of Grain to be brewed the said Thomas Rushton consents and agrees thereto'. The most obvious meaning of this clause is that while Rushton was not required to pay for materials, the amount of grain delivered was to be determined by the Commissary, presumably in line with the Commissary's own requirements.

How this two-edged sword worked, or whether it even applied, is unclear. In the Commissary's Notice of 1 March on, among other things, the leasing of the brewery, there is no mention of materials being included in the deal, but only of 'buildings, brewing utensils, and cooperage' being rented. The Commissary, who would have been in charge of supplying the brewery with materials, considered that brewing was being 'discontinued on the part of Government'.²³⁹

Alternatively, it may have been that the government delivered grain at first but this quickly ceased. Rushton's report for March-April 1806 is an 'account of malt made and beer issued', while in June-July it is simply a return of beer issued.²⁴⁰ The first report identifies 100 bushels of barley malted, while the second report makes no mention of the quantity of grain malted. This may simply be an omission or it may be that only grain delivered by the government was reported.

²³⁹HRNSW VI, p. 22.

²⁴⁰Return of beer issued since the last return dated 17 June; Account of malt made and beer issued since the last return (AONSW, Col. Sec. 4/1719, pp. 210-13 and 214-6).

A completely different interpretation is that Rushton paid for grain received from the Commissariat. The second clause of the agreement may have indicated that Rushton could not count on the Commissariat supplying as much as he needed. If so, the brewery's operations were run from the beginning on a completely commercial basis, with all factors – premises, equipment, materials and labour – paid for by Rushton. Certainly King presented the lease as a strictly commercial arrangement. 'The rent to be paid in Beer [in the margin: '200 Gallons a Month'] for the use of the Convicts at Public Labour is equivalent to the Interest of the Work done on the Premises and the Cost of the Utensils in England, viz, £1,568 3s.'²⁴¹ King's statement of the rent being for the premises and equipment is further suggestive evidence that materials were not provided for free by the government as part of the deal. At 1s a gallon for strong beer, the rent was £120 a year, giving a rate of return of 7.7 per cent, although this must be qualified by an unknown but apparently large rate of depreciation, which is discussed below.

Whatever the exact conditions of the lease, there can be no doubt that the performance of the brewery quickly improved under these new arrangements. In the month to 17 April 1806, 2,915 gallons of beer were sold, the highest output since the brewery opened. Output continued to increase. In the month to 17 July, 5,550 gallons were sold, roughly the same output as for the first six months of 1805.²⁴² This return suggests that output was still rising. In the first two weeks of the return, 2,253 gallons of beer were sold. In the second half, this rose to 3,297 gallons, giving a weekly figure of 1,649 gallons. The brewery was finally beginning to operate at something like its capacity of 3,000 gallons per week.

This conclusion is at odds with Walsh's view that the brewery 'appears to have functioned only intermittently' after it was leased, which seems to be based on a misreading of the three accounts in the Archives Office of New South

²⁴¹15 March 1806, HRA V, p. 654.

²⁴²Accounts of the Government Brewery 1804-6, AONSW, Col. Sec. 4/1719, pp. 209-16.

Wales.²⁴³ These accounts cover, in order of presentation, 10 December 1804 to 30 June 1805; 18 June to 17 July 1806; and 18 March to 17 April 1806. Walsh takes the second account to be for 1805 not 1806, probably because of the order of presentation. This mistake leads to the conclusion that there was only one return in 1806, lodged shortly after the brewery was leased. But there are two surviving returns for 1806, and each of these mentions returns from the previous month, which are now lost. The absence of full records, then, should not be interpreted as proof of intermittent production. It seems most likely that Rushton was brewing regularly, and making monthly returns to the Commissary, for all of the term of his lease. This is supported by other evidence. The March-April 1806 account mentions a cart for the delivery of beer. In December 1806 and March 1807, Gregory Blaxland paid Rushton for cart hire.²⁴⁴ More telling are the records of Blaxland's brother, John. An important by-product of brewing are spent grains which are usually supplied to farmers for fattening pigs and cattle. Rushton made several sales of spent grains to John Blaxland in 1807 and early 1808. Six payments were made by Blaxland to Rushton from August 1807 to March 1808, when the government brewery was leased to James Squire (see below). Payments were resumed to Rushton in June 1808, by which time he had established himself in a new brewery (also see below). That Rushton was brewing on some scale is supported by the size of the payments made for the spent grains, which ranged from £8 10s 9d to £31 6s 4d, and averaged nearly £17. By contrast, a small brewer, Thomas Evestaff, made a sale of spent grains in October 1807 of only 10s.²⁴⁵

From the returns, Rushton had established himself not only in Parramatta, but in the outlying areas of Richmond and Castle Hill, and in the important

²⁴³Walsh, *Manufacturing*, ANU, p. 23.

²⁴⁴A Statement of Capital advanced by Mr Gregory Blaxland in his concerns from the 27th day of December 1806 to the 24th day of November 1807, AONSW, Col. Sec. 4/1727, pp. 187, 189.

²⁴⁵A Statement of Capital advanced by John Blaxland in his concerns from the 3rd day of April 1807 to the 17th of September 1808, AONSW, Col. Sec. 4/1727, pp. 200, 203, 205, 207, 210 (6043).

Sydney market. In April-March only one sale, of 10 gallons, is recorded outside Parramatta and Sydney, and three of the Sydney sales were for 100 gallons or more. By June-July, Rushton's sales to the smaller settlements had increased considerably and eight sales to Sydney were for 100 gallons or more. Clearly, Rushton was enthusiastic in selling his product to both small private buyers and larger retailers.

The increased output was despite Rushton taking over at a difficult time for getting ingredients. Floods in February 1806 were followed by the great Hawkesbury flood of 22-4 March, the most severe since early 1801 in the bread basket of the colony. In all, over 87,000 bushels of wheat, maize and barley were lost.²⁴⁶ There were other farming areas, notably Kissing Point on the Parramatta River, and Norfolk Island, which could make up the deficiency, but the latter had a poor wheat crop and blight attacked much of the maize.²⁴⁷ About a sixth of the Hawkesbury barley crop was lost, and barley was to be issued as part of the ration to make up the loss of other grains.²⁴⁸ These events fit with the supposition that after his March-April return Rushton turned to private suppliers of grain as the Commissary withheld grain from the brewery.

Increased sales in 1806 were not a matter of increased output being eagerly lapped up by drinkers insensitive to price. King had boasted in late 1804 that 'The prices put on the beer places it within every person's reach',²⁴⁹ but prices fell considerably when the brewery was leased. Previously, licensed persons had been allowed 32 gallons at 1s 4d per gallon, 'on Condition that they do not retail it at more than Six Pence each full Quart'. Other allowances were five gallons to commissioned civil and military officers; and three to superintendants, sergeants, and settlers 'as the Governor judges proper, and as the Quantity in the Brewery may admit of'. The price to all of these was 1s per gallon

²⁴⁶The Rev. Marsden's inspection report, HRA V, pp. 759-60.

²⁴⁷SG, 13 April 1806.

²⁴⁸King to Camden, 15 March 1806, HRA V, p. 651.

²⁴⁹King to Hobart, 20 December 1804, HRA V, p. 170.

for both kinds of beer.²⁵⁰ Under the lease, Rushton was required to sell strong beer at 1s per gallon and table beer at sixpence, 'and not to dispose of the beer so brewed to individuals for the purpose of monopolizing its sale by retail, but its distribution to be as general as possible'.²⁵¹

Prices fell in two ways under the leasing agreement. Rushton was no longer compelled to sell to retailers at a wholesale price a third higher than the bulk retail price to select consumers. Drinkers who took their beer on licenced premises probably benefitted from the lower wholesale price to licensees, even though the old maximum retail price of 6d per quart had been abandoned. At the very least, the abandoning of this maximum price and a lower wholesale price may have resulted in more publicans carrying the beer, which fits with the significant increase in bulk sales. More importantly, Rushton was relieved of the curious policy of charging the same price for strong and table beer. Table or small beer was an important part of contemporary British brewing practice. It was often 'nothing more than a byproduct – brewed with what amounted to spent grains, after strong ale worts had been drawn from the mash tun, and the result must have been a very thin and uninteresting drink'.²⁵² To have sold the product of this second or even third wash for the same price as strong ale must have been an irritation to the consumer to say the least.

The leasing of the brewery also saw a final tightening and rationalisation of what today are called the 'community service obligations' (CSOs) of 'government business enterprises' (GBEs).²⁵³ In 1804, King had been very keen

²⁵⁰Government and General Order, 25 September 1804, HRA V, pp. 272-3. Distributions of imported spirits at the time similarly favoured civil and military officers over the lesser orders, and over licensed people, see HRA V, pp. 277, 279. The Order of 25 September hints that publicans received their beer in the keg and delivered, while individuals provided their own kegs and had to pick them up at the brewery, which would explain some of the difference in price.

²⁵¹Commissary's Notice, 1 March 1806, HRNSW VI, p. 22.

²⁵²Ian Donnachie, *A History of the Brewing Industry in Scotland*, John Donald, Edinburgh, 1979, p. 113.

²⁵³A CSO is an activity which a GBE is directed to do by government in pursuit of a stated public benefit, and which would not be undertaken on purely commercial grounds or would only be undertaken at a higher price. It should be noted that in identifying an activity as a CSO, it is not necessarily the case that the stated objective is of public benefit or that the activity is the best way

to see the beer generally distributed including 'to the prisoners at Government labour, to whom it has been liberally extended during the present harvest'.²⁵⁴ Indeed he had envisaged 'an overplus' within a few weeks, 'which would 'be disposed of, or issued gratuitously to other descriptions' [of persons].²⁵⁵ Beer would also be issued to the civil and military contingents at Newcastle and Port Dalrymple, at the rate of half a gallon per day per man, in lieu of their spirits ration of half a pint a day.²⁵⁶ The return for 15 September to 9 December 1804 shows that the various classes of paying customers – civil and military officers; constables, watchmen etc; and licensed people and settlers – bought 2,306 gallons. Free allocations to prisoners at public labour and for government use in lieu of spirits amounted to 1,891 gallons, or 45 per cent of output. Such generosity could not continue as the poor performance of the brewery became more apparent. In the return for 10 December 1804 to 30 June 1805, the weightings were considerably changed. Allocations to prisoners at government labour and for other government purposes made up only 988 gallons, or 16 per cent of the 6,096 gallons sold or otherwise distributed. Sales to civil and military officers were 2,070 gallons and to licensed people and settlers, 3,038 gallons. Under the lease with Rushton, the government capped the convict allocation at 2,400 gallons a year and effectively paid the brewery for this service, as the amount of beer received for distribution to the convicts was equal to the rent on the brewery. At 200 gallons a month, the convict allocation was roughly the same size as for the five months from mid-December 1804 to mid-May 1805. Relatively speaking, however, it was only 4 per cent of total output for June-July 1806.

The success of the brewery under private management was immediate and obvious. In his enthusiasm before operations commenced in 1804, King had requested two more sets of utensils to establish government breweries in the other

of achieving the objective.

²⁵⁴King to Hobart, 20 December 1804, HRA V, p. 170.

²⁵⁵Government Order, 25 September 1804, HRA V, pp. 272-3.

²⁵⁶Government Order, 6 October 1804, HRA V, pp. 273-4.

population centres of Sydney and Norfolk Island. When a second set of utensils did arrive from England on 11 April 1806, King sold the equipment to a well known businessman, Andrew Thompson, to allow him to establish a brewery in the Hawkesbury. Thompson paid for the utensils at cost 'with the usual Advance of *Fifty Per cent*', and, like Rushton, was obliged 'To supply the Inhabitants with good Beer at no more than *One Shilling per Gallon*, and Small beer at *Sixpence*' and 'Not to dispose of the beer so brewed to particular individuals, but the distribution to be as general as possible'.²⁵⁷ While still attempting to control prices and prevent monopoly, King did not repeat the mistake made at Parramatta.

Rushton's lease states a term of only one year, but other documents say that it was for two years, and from the evidence of his sales of spent grains, it seems that he operated the brewery until the lease expired in February 1808.²⁵⁸ Huntington has it that the brewery prospered under Rushton until 'the revolutionary proceedings of the New South Wales Corps... brought about its stoppage'.²⁵⁹ This conforms with Walsh's general view that after Bligh's deposition on 26 January 1808, 'conditions were inauspicious for a time for an industry that was specially designed to reduce the consumption of spirits'.²⁶⁰ These views about the fate of Rushton, the government brewery and the brewing industry in general during the interregnum are not supported by the evidence. It is much more likely that Rushton was not closed down by the rebels, but rather that his success from 1806 to 1808 allowed him to take the next step in his career. On 9 May 1808, he leased Wilshire's brewery in Sydney for a year before moving to his own brewery in the centre of town.²⁶¹ Far from being a bad time for brewing,

²⁵⁷General Order, SG, 11 May 1806. Transport Commissioners to Governor King, 22 June 1805, HRA V, p. 486, shows a brewing copper etc, supplied by J. Compton, for £144 14s 8d, to go aboard the *William Pitt*. Also on board were £28 6s worth of hops for barter (p. 487).

²⁵⁸Commissary's Notice, 1 March 1806, HRNSW VI, p. 22; King to Camden, 15 March 1806, HRA V, p. 654.

²⁵⁹Huntington, 'History', 16 February 1903, p. 16. This view is repeated by John Webster, *Early Breweries of Australia*, Sydney, 1931, ML, MSS 4849, p. 258.

²⁶⁰Walsh, *Manufacturing*, ANU, p. 25.

²⁶¹NSW Judge Advocates Office, Register of Assignments, No. 2, p. 11, no. 22, LTO; Walsh, *Manufacturing*, ANU, p. 26.

the industry flourished in 1808 and 1809 with established brewers like Squire, Rushton and Thompson continuing to operate and at least two major new brewers starting up (see Chapter 4). Finally, the government brewery was not closed down, but passed to Squire, who took it up on 20 March 1808 for three years at a cost of £220 to be paid in grain.²⁶²

Among the many accusations levelled by Governor Bligh against 'Major Johnston and his Party' was the letting of 'the Government Brew-house, factory, and government garden at Parramatta'.²⁶³ Bligh does not elaborate his concerns, but this fleeting reference to the brewery occurs in a long chronicle detailing the rebels' impropriety and maladministration, from which we might deduce three possible reasons for Bligh's opposition to the leasing. First, whatever the rebels did was illegal given they were not the legitimate authority in the colony. Second, government property was being disposed of to 'Party' members for nothing or below its proper worth. Third, government property was being sold or leased as part of an undesirable tightening of fiscal policy: 'Everything they think of is done... to impress an Idea that the Colony can be supported at less expence than hitherto'.²⁶⁴

The first, and fundamental, criticism is true; there is no more that can be said about the brewery on this score. The second and third criticisms can be assessed in the case of the brewery, and are unsupportable. Squire's rent works out at about £6 2s 3d a month while Rushton was paying £10 a month, but then Squire may have paid in advance, while Rushton was paying monthly. Both were able to pay in kind, with wheat and beer respectively. Further, the brewery and some unspecified minor public works at Parramatta were valued by King at about £1,000 on 13 August 1806 and presumably had depreciated further by March 1808.²⁶⁵ If the rebels used the 1806 valuation, which included the other works,

²⁶²NSW Judge Advocates Office, Register of Assignments, No. 2, p. 17, no. 47, LTO.

²⁶³Bligh to Castlereagh, 30 April 1808, HRA VI, p. 439.

²⁶⁴HRA VI, p. 440.

²⁶⁵Abstract of Expenditure, HRA V, p. 789.

the annual rent was 7.33 per cent of the valuation, roughly the same as the 7.7 per cent received from Rushton. It is impossible to compare the two deals more accurately but it does not seem that Squire was favoured in the deal. Finally, Bligh's concerns about the rebels' economic policy seem particularly disingenuous in regard to the brewery. He was not interested in the brewery during his governorship. There appears to be nothing in his correspondence on it, and in his statement of 13 August 1807 on the condition of government buildings, he does not mention the brewery.²⁶⁶ Moreover, he must have been aware that the brewery had already been leased by King and that it had prospered under that arrangement. The rebels' decision to lease the brewery was a continuation of a sensible policy established by a previous governor, not a departure from good policy as Bligh seems to suggest.

Why Squire leased the brewery is unknown. His own brewery at Kissing Point, halfway between Sydney and Parramatta on the Parramatta River, was developing well. Whatever plans he had for the government brewery, they did not eventuate. In June 1810, the Acting Commissary, William Broughton, gave notice that the brewery and all of its utensils would be let by public auction for the term of one year, 'the highest Bidder to be the Renter, who is to find Security for the Payment of the Rent by Quarterly Instalments'.²⁶⁷ The lease appears not to have been taken up: the brewery was not among the six breweries known to have been operating in 1811 (see Chapter 4). Jervis has it that Patrick Hayes operated the Emu Brewery from the premises in the 1840s, but the government brewery had ceased to exist long before, in 1810 at the latest, and perhaps before.²⁶⁸

²⁶⁶Bligh to Windham, 31 October 1807, HRA VI, pp. 169-70.

²⁶⁷SG, 23 June 1810. The auctioneer was James Larra, which appears to have led John Webster to his assertion that Larra let the brewery in June 1809 for a year (Early Breweries of Australia, Sydney, 1931, ML, MSS 4849, p. 259). There is no evidence for the claim in the Registers of Assignment or in Bergman's detailed life of Larra (George F. J. Bergman, 'James Larra, the commercial nabob of Parramatta', *Australian Jewish Historical Society Journal and Proceedings*, vol. V, part III, 1960, pp. 97-130).

²⁶⁸James Jervis, *The Cradle City of Australia: A History of Parramatta 1788-1961*, Parramatta Council, 1961, pp. 104-5. Hainsworth, *Sydney Traders*, p. 189, says that the brewery closed down two years after Squire leased it.

There is No New Thing Under the Sun

The few historians who have written about the government brewery have presented it as part of a larger story of the retarded development of the brewing industry in early Australia caused by the scarcity of inputs and the thirst for spirits. In fact, the brewery's dismal failure in 1804 and 1805 was due to internal problems in its management. This is shown very clearly by the remarkable improvement in its performance when it was leased in 1806. Rushton's success as a lessee shows that there was a demand for beer and that colonial brewers could meet that demand, as other private brewers such as James Squire were already proving. But a closer examination of the brewery does more than just contribute to a reassessment of the brewing industry. It also adds to our understanding of the role and performance of government in early colonial Australia by revealing a sequence of events which is wholly familiar to those who have followed recent economic policy in Australia and overseas.

While this major government initiative had the enthusiastic support of the highest officials at home and in the colony, it was an ill-considered venture. The objective – to reduce the abnormally high consumption of spirits – was largely illusory. High alcohol imports around 1800, when King arrived, were not evidence of a mania for consumption but the result of a short lived glut in supply. More generally, the relatively normal levels of alcohol consumption in the early decades of the colony make one suspicious of the official view that most of 'the lower order' were indiscriminate consumers who had to be protected from themselves. But even to the extent that there was a 'spirits problem', building a government brewery was an unnecessary response to it. Private business had shown its willingness and capacity to respond to the demand for beer. Boston & Co. in particular had precociously invested in brewing on a large scale in the 1790s. When the partners of this business left Sydney in 1801, the brewing industry was undoubtedly set back, but others were there to fill the gap. When the

government brewery began production in 1804, there were breweries in Sydney and on Norfolk Island as well as Squire's brewery at Kissing Point. Certainly, the government's importation of brewing equipment was not without effect in the still primitive economy. Of the four large breweries operating in 1808, two were using government equipment (see Chapter 4). But one of these had been privately built and had purchased the equipment from the government, and the other was privately leased, while the other two breweries had developed without any government involvement at all. At the very most, government should have limited itself to the importation of brewing equipment for sale to private brewers.

There was no need for the government to engage in the business of brewing and every reason for it not to do so. The truth of this second point was brought home to King within a matter of weeks of the brewery's commencement. Here was a spectacular white elephant, with many of the hallmarks of costly and unsuccessful government businesses today. The increasingly grandiose conception of the project delayed commencement, no doubt caused budget overruns, and resulted in overcapitalisation, with a capacity and technological sophistication far greater than more modest but successful private brewers. Operating costs per gallon were high, especially due to its staffing problem which saw considerable wastage and low labour productivity. Typically for government operations, there were hidden costs carried by other parts of government, such as the time of the Commissary, magistrates and constables engaged in supplying grain to the brewery. Its pricing policy for paying customers was bizarre both for different classes of client and different classes of output. And it was saddled with large community service obligations which added considerably to its large financial losses. As is so often the case with government involvement in business, these CSOs were the main reasons given by officials for the brewery's establishment, and are therefore worth some further comment.

Three types of CSOs are commonly identified in the literature on the subject; the brewery's operations included all three. The services of a government

business enterprise may give benefits: to particular individuals, especially those regarded as in need, such as a concession for pensioners using government-run public transport; to the community, such as a general subsidy on the same public transport to encourage its use, in order to reduce traffic congestion and pollution; or to another government agency, such as subsidised power provided to government agencies by an electricity authority. The first two CSOs are to consumers; the last is to producers. Lord Hobart's desire that the brewery might afford the occasional beer 'to the unfortunate people who are expiating their crimes' placed an individual welfare CSO on its operations. As the beer allowance to the convicts was seen by King as an incentive to greater exertion on their part in public labour, especially during harvest time, it was also a production CSO, or cross subsidy between government programs, as was the distribution of beer to soldiers in lieu of their standard spirits allowance. Above both of these considerations was the strong sense of the social benefits of reduced spirits consumption: reductions in drunkenness, crime, indolence and immorality. Beer drinking would bring, in the economist's jargon, large positive externalities. As so often happens today, the government brewery worked poorly in regard to its stated CSOs. The value of the first and third types of CSO was large relative to the total output of the brewery, but small relative to the envisaged output for CSO use and to the total cost of production, reflecting the brewery's failure to brew at anywhere near its capacity, and its overall inefficiency. It would have been better to have called for tenders to supply beer for these purposes. As for the second type of CSO, leaving aside the question of whether spirits drinking was such a problem, the positive externality from the brewery in 1804 and 1805 must have been at best small given the low level of output. It is, indeed, unlikely that the brewery had any effect on spirits consumption during this time. Not only was the brewery a financial disaster, it was a failure against its stated objectives.

King had wanted a large, successful government operation and was seemingly uninterested in the development of a successful competitive market.

So, for example, the sale of hops to a private brewer in mid-1803 was clearly seen as a temporary expediency while the brewery was being established, and not as an encouragement to private brewing. But the failure of the brewery, and a general concern about the finances of the colony, forced King to change his policy. King's tight fiscal policy was criticised by contemporaries and has been put forward by historians as a distinctive and significant feature of his period of government.²⁶⁹ Governor Hunter had exercised little control over public expenditure and was criticised by the Duke of Portland for it. In Hunter's last full year of office – 1799 – Treasury bills for about £34,000 were drawn in New South Wales. King was determined to follow his instruction to minimise the cost of the colony to the British Treasury. In his first full year as governor – 1801 – Treasury bills were drawn for £10,232. King dealt with the three main parts of the budget: recurrent expenditure, capital works and revenue. He enforced the regulation that officers were not to receive clothing or provisions for more than two convicts and reduced the price paid for grain by the Commissariat. He initiated relatively few public works, with several projects inherited from Hunter still unfinished at the end of King's term of office. Even the three major projects he undertook – the re-establishment of public agriculture, and the establishment of the government brewery and a saltworks – were aimed at reducing public expenditure. Finally, he introduced a range of taxes on shipping and imports, aimed in particular at spirits, which served both to raise revenue and to regulate trade.

No doubt, attempts were made in 1805 to extricate the brewery from its operational and financial difficulties, but these only saw some tightening of its CSOs and a brief and limited increase in output in March/April. Worse still, the authorities may have attempted to reduce private competition with the government brewery. In March 1805, the Parramatta magistrates ordered the

²⁶⁹This paragraph is based on detailed discussion in G. J. Abbott, 'Governor King's Administration' and 'Government Works and Services', in G. J. Abbott and N. B. Nairn (eds), *Economic Growth of Australia 1788-1821*, Melbourne University Press, 1969, pp. 162-75 and 306-24.

'private brewer to desist from his unauthorised labours, and no beer to be vended but by licence', claiming that they were responding to 'the various complaints that have lately occurred at Parramatta'.²⁷⁰ The order is troubling. While a liquor licence was required to retail beer, neither commercial nor domestic brewers required a licence to brew or to sell wholesale. It is also hard to imagine that private brewing had caused complaints, at least among the general public. Whether or not the government was attempting to restrict private activity to bail out a failing government business, it is clear that significant internal reform did not happen. Instead, problems worsened, to the point where production ceased. As with so many politicians and officials since, it seems that King was not a liberal reformer by inclination, but became an economic reformer by necessity. Tenders were called, Rushton's bid was successful, and the brewery was leased. At the same time, King leased the Sydney salt pans 'on the same Principle'.²⁷¹ His retreat from public agriculture had begun in 1804 and was completed in 1806.²⁷² King's speed and decisiveness in these three matters stand in contrast to modern Australian experience, where many years of failure can pass without action. And in many ways the leasing of the brewery was a copy book exercise in what is now called 'outsourcing' or 'contracting out'.²⁷³ The contract was reasonably clear and precise, but also appears to have allowed for some change in its operation as circumstances in the supply of grain changed. Price and quality controls remained but the lessee was not prevented from introducing a commercially rational price structure for strong and table beer. By equating the CSO with the rent to be paid, King made the CSO 'transparent' and contracted its provision to a private provider. The evidence is incomplete but nevertheless sufficient to establish the

²⁷⁰SG, 3 March 1805.

²⁷¹HRA V, p. 654. The contract is on pp. 669-70.

²⁷²Abbott, 'Government Works and Services', p. 311.

²⁷³For a comprehensive introduction to the subject, see Industry Commission, *Competitive Tendering and Contracting by Public Sector Agencies*, Report No. 48, Industry Commission, Canberra, 1996. The agreement with the privately guaranteed and by then conditionally emancipated Rushton cannot be considered an 'in-house bid'.

huge increase in its output and sales. In the language of modern public policy, efficiency and effectiveness were considerably improved.

Even so, a doubt remains. Leasing the brewery in 1806 was clearly preferable to leaving it vacant or trying again to run it as a government operation, but was it preferable to selling it? Auctioned in one lot or several lots, the building and equipment would have found bidders, including Squire, and Rushton and his backers. While the price received would have been below its valuation of over £1,500, the rent received was probably less than the rate of depreciation, and, as it turned out, only lasted for two years, before falling, in line with depreciation. This lower rent lasted another couple of years and then ceased. King could not have foreseen the brewery's short life and his decision to lease rather than to sell may have been sound at the time. But it may also have been the case that he was unwilling to give up entirely on government involvement in the industry. Like many of his counterparts today, King took the managerial option of contracting out in preference to the liberal policy of getting out. That the brewery's poor performance improved under private management does not mean that King chose the best way out of the mess that he had created, just as it does not vindicate his getting into the mess in the first place.

Table 3.1: Employment of Convicts at the Government Brewery

Date	Number
December 1803	0
March 1804	3
June 1804	4
September 1804	6
March 1805	6
June 1805	6
September 1805	5
December 1805	1
August 1806	0
June 1807	0

Sources

Quarterly Employment of Convicts Victualled and at Public Labour, HRA IV, pp. 505, 617; HRA V, pp. 44, 184, 313, 501, 617, 663, 781; HRA VI, p. 180. In HRA IV, p. 505, the brewery is included with the Orphan House in Sydney. It is a separate category of employment in HRA IV, p. 617. From HRA V, p. 44 onwards, the brewery is included with a sailmaker in Sydney, with the exception of the entry on HRA V, p. 184, which has a heading of 'Brewery' but includes a convict employed in Sydney. This is clearly the sailmaker listed in previous and subsequent returns. Employment in the Orphan House and as a sailmaker can be clearly distinguished from the government brewery in Parramatta as the returns are divided into major districts: Sydney, Parramatta, Hawkesbury, Toongabbee and Castle Hill.

Table 3.2: Production of the Government Brewery

Reporting Month	Gallons
September/October 1804	2,342
October/November	612
November/December	1,293
December/January 1805	1,141
January/February	930
February/March	1,344
March/April	1,817
April/May	1,656
May/June	0
1-21 July	865
March/April 1806	2,915
June/July	5,550

Sources

HRA V, p. 176 for 15 September to 9 December 1804; AONSW, Col. Sec.

4/1719, pp. 209-16 (6041) for 10 December 1804 to 30 June 1805, 18 March to 17 April 1806 and 18 June to 17 July 1806. Rushton signed the lease on 17

February 1806 and provided a return on the seventeenth of each month. To allow

a comparison with earlier output, monthly figures for 1804-5 have been arranged here by a reporting day of the fourteenth of each month, as production began on

15 September 1804. The figure for 1-21 July 1805 is derived by subtracting the total for the previous months from 12,000 gallons. King wrote to Joseph Banks,

21 July 1805, Banks Papers vol. 7 (King 1788-1805), ML, A78-6, pp. 264-5

(FM/1749), that '12,000 Gallons of Beer have been made since September last' at the Parramatta brewery. It is quite possible that 12,000 is a round estimate and

that the brewery ceased operation in mid-May, although the maintenance of five convict labourers at the brewery until at least September, and King's tone in his letter to Banks, suggest not.

Chapter 4

Commercial Brewing: 1801-1821

The government brewery is one of the best documented business ventures in early Australian history, but, as the records have been partially and incorrectly used, quite mistaken conclusions have been drawn about the brewery, and, therefore, about the Australian brewing industry in the early nineteenth century. The brewery was a failure as a government-run business, and a success when it was leased. Its history does not support the view that the brewing industry was retarded by limited demand for beer and near-insurmountable barriers to supply. Rather, it shows that there was a large market for beer and that a well-managed brewery could produce on a large scale. Contemporaneous developments in commercial brewing were proving this point. When correspondence on the government brewery began in 1801, it is quite possible that James Squire alone was a brewer of any note in the colony. By 1804, when the government brewery commenced operations, there were several other energetic, if small scale, brewers at work. In 1806, when the brewery was first leased, there were at least three other substantial breweries operating. In 1810, when the second lease lapsed and the government brewery closed, the number of breweries had increased, and the foremost among them had increased in size and sophistication. The government brewery had been rapidly overtaken by a vigorous new industry.

Some of the breweries established before 1810 failed in the next decade, as did some new ventures, but the industry nevertheless developed considerably due to the success of three men who had the greater part of total production: James Squire, Thomas Rushton and Nathaniel Lawrence. By 1821, these three had been in the local brewing business for fifteen to thirty years, and their breweries had become large operations by colonial standards. They formed the core of an industry which was producing about 12 gallons of beer per head per year. This dwarfed beer imports, which were about one gallon per head per year, and meant

that average beer consumption in the colony was in line with Australian figures from about 1890 to the second world war.

Brewing During the Administrations of King, Bligh and the Rebels: 1801-09

In the eighteenth century, the colony's beer drinkers had been served by Boston & Co., Squire and anonymous very small time brewers. When the partners of Boston and Co. left the colony in early 1801, it is quite possible that their brewery closed, with local production falling accordingly. Unfortunately, there is no evidence available to us about this particular matter or the brewing industry in general at the time. With the establishment in 1803 of the colony's first newspaper, *The Sydney Gazette*, information about the industry increased considerably, both through the *Gazette*'s advertisements and its reporting on the progress of hop growing, malting and brewing, which were matters of great interest to its editor, George Howe.

It would seem from the *Gazette* that brewing in the colony was lagging demand. That was clearly the opinion of Michael Hayes in August 1803, who advertised that

from an Indulgence granted him [, he] is desirous to engage as an
ACCOMPTANT in a Mercantile Situation:— **or in The Brewing and
Malting Business**, Which would be the most Lucrative to an Adventurer,
of any Branch that could be conducted in this Colony.²⁷⁴

It seems unlikely that Hayes found his position – in 1805 he would be convicted for illicit distilling – but others were taking up the lucrative adventure of brewing. On Christmas Day 1803, William Stabler advertised 'that he has laid in a Stock of prime Strong BEER, which he has had brewed of superior strength and

²⁷⁴SG, 28 August 1803; repeated 11 September and 9 October.

quality'.²⁷⁵ The beer was for sale at an eating house in Pitt's Row (modern Pitt Street) run by Rosetta Stabler. She had moved to these premises in July, having previously occupied two sites, where she had sold 'Draft and Bottled Beer'.²⁷⁶ Whether Rosetta Stabler had stocked locally produced beer at her first two establishments is not known. Neither is it known whether William Stabler's Christmas beer was part of a larger brewing effort or a one-off seasonal event, nor whether he was brewing himself or had ordered the beer from another, as the wording of the advertisement suggests.

By next Christmas, a brewery on some scale had undoubtedly been established in Sydney. A notice appeared in the *Gazette* on 23 December 1804 for Larken's Colonial Brewery at 45 Chapel Row (modern Castlereagh Street). Larken's was, at least according to its owner, an ambitious entry into the market. It sold pale, brown and amber ales, twopenny and London porter, all 'prepared after the system of the British Breweries'. The owner appealed to the public concern over spirits abuse, promoting his product's 'conduciveness to Health, Sobrierty, and Oeconomy'. Meanwhile, from at least the beginning of 1804, Norfolk Island had its own brewery. William Thompson wrote from Norfolk to Thomas Jamieson, the Surgeon General at Sydney, that

I have pursued for some time the Brewing of Strong Beer and have succeeded in it beyond my most sanguine expectations, allowed by every Gentleman that my beer is superior to any that has been made and I have to observe that I perfectly understand that business thro' every part of the process.²⁷⁷

²⁷⁵SG, 25 December 1803.

²⁷⁶SG, 8 and 15 April, and 24 and 31 July, 1803.

²⁷⁷Letter of 2 May 1804, D'Arcy Wentworth Correspondence 1783-1808, ML, A751, p. 133 (CY 699, p. 139).

None of these men had a large or permanent place in the brewing industry. In 1806 William Stabler was 'ordered to Castle Hill, for harbouring two seamen, deserters from the Aurora'.²⁷⁸ Two men by the name of William Thompson were on Norfolk Island from 1796. Both appear to have been free-of-servitude convicts holding land. One returned to Sydney in February 1805. The other went to Tasmania in 1808, as part of the relocation of the population of Norfolk Island, mainly to New Norfolk and Norfolk Plains in Tasmania, from 1805 to 1813.²⁷⁹ Neither appears in the history of brewing in New South Wales or Tasmania. A Thomas Larkens or Larken announced he was leaving the colony in 1805.²⁸⁰

While these small-scale brewers came and went quickly, opportunities in brewing were still being promoted or adverted to. A vacant lot known as Spring Garden at the end of Pitt's Row was advertised in late 1805 as suiting a business, 'particularly Brewing, as there is a good supply of water'.²⁸¹ By this time, however, James Squire was brewing on a large scale and had almost certainly established himself as the colony's largest brewer, filling the gap left by Boston and Co.'s departure. On 1 July 1804, Squire advertised:

Wanted to Purchase. Any Quantity of Barley, from ten to a Thousand Bushels, for which a full price will be paid on delivery, in Cash or approved Bills, to be delivered at the House of Mr Thomas Halfpenny at Parramatta. Samples to be sent to Mr Squires at Kissing Point, with the Quantities ready for delivery.²⁸²

On 4 November 1804 he advertised for

²⁷⁸SG, 22 June 1806.

²⁷⁹Reg Wright, *The Forgotten Generation of Norfolk Island and Van Diemen's Land*, Library of Australian History, Sydney, 1986, pp. 58-9, 68, 102, 112.

²⁸⁰SG, 24 and 31 March 1805. A Thomas Larkin announced the same intention in SG, 30 July 1809.

²⁸¹SG, 8 December 1805.

²⁸²SG. Repeated 8 July.

From One to Three Hundred bushels of shelled Corn, to be delivered at the house of Thomas Halfpenny, at Parramatta, for which 4s per bushel will be paid in cash or bills; samples to be sent to James Squires. It must be well selected, and void of blemish. Also, from 1000 to 1500 bushels of good barley, not to be threshed out until February next.²⁸³

These purchases were on top of his own production of grain which appears to have increased rapidly. In mid-1800 Squire had five acres under wheat and 45 more ready for planting in maize and barley. By 1802 he owned 291 acres, with 28 under grain. By 1806 he had 986 acres through grant and purchase and at least ten men indentured to him as servants.²⁸⁴

How much of his grain production was put to brewing is unknown: his purchases suggest the minimum amount of grain malted and beer brewed. The barley to be purchased in February 1805 would have produced 5,000 to 7,500 gallons of Squire's best beer, at the high rate of 10 bushels to a hogshead indicated in his evidence to the Bigge inquiry in 1820.²⁸⁵ It is likely that Squire was already brewing chiefly with maize, barley being used only in the winter months. Because of the failure of the barley crop in late 1804, his winter brewing in 1805 may have used maize as well. Nevertheless, his advertised requirements for barley give an indication of the minimum level of Squire's output. If Squire made the same quantity of beer in summer as in winter, and made table beer at the rate of one gallon for every two gallons of strong ale, he made 15,000 to 22,500 gallons in 1805. The white population of about 7,700 was drinking 2 to 3 gallons of Squire's beer per head. Smaller brewers presumably added a few thousand gallons to total production, while the government brewery added about 7,000 gallons in the first half of the year. Average consumption of local beer was at least

²⁸³SG. Repeated 11 November. On 18 and 25 November, Squire was still advertising for the barley. 'The required quantities of Maize being made, no further supplies [were] necessary.'

²⁸⁴Gillen, *Founders of Australia*, p. 342.

²⁸⁵Ritchie, *Oral Evidence*, pp. 116-7.

4 gallons in 1805 and must have increased considerably in 1806 as the revitalised government brewery at Parramatta and Thompson's Windsor brewery came on stream.

The Parramatta brewery was producing more than 5,000 gallons a month by the middle of 1806 and was probably a larger producer than Squire's. Even if average monthly production for 1806 was half of its mid-year figure, the Parramatta brewery would have made 30,000 gallons of beer that year. The equipment for the Windsor brewery had cost the same amount of money and was presumably of roughly the same capacity as the equipment despatched for the Parramatta brewery. On the other hand, the Parramatta brewery had been built and enlarged at considerable cost. It is unlikely, then, that Thompson's operation was as large as Rushton's, or even Squire's, but it nevertheless would have produced several thousand gallons a year. There were other, smaller brewers in the colony. Putting all of this together, the colony's nearly 8,000 inhabitants drank at least six gallons of colonial beer per head in 1806.

Confirmation of the size of Rushton's output was given in October 1807 by sales of spent grains to John Blaxland from 9 August 1807 to 18 June 1808 totalling £107 16s 10d.²⁸⁶ Blaxland's accounts do not give the price but in England in 1808, spent brewers' grains fetched only 3s a quarter.²⁸⁷ Very broadly speaking, grain and beer prices in New South Wales were comparable with England at the time (see Chapter 6) and it seems reasonable to expect a roughly similar price for spent grains in the two places. If so, Rushton had used 5,752 bushels of grain, sufficient for 27,610 gallons of strong ale, in somewhat less than a year. Even if Blaxland was the sole buyer for Rushton's grains, and if Rushton produced one gallon of table beer for every two gallons of strong, Rushton's total

²⁸⁶A Statement of Capital advanced by John Blaxland in his concerns from the 3rd day of April 1807 to the 17th of September 1808, AONSW, Col. Sec. 4/1727, pp. 200, 203, 205, 207, 210. These are accounts of bills paid, so that the last bill of only £6.10.0, paid on 8 June 1808, was probably for grains delivered prior to Rushton's move from the government brewery to Wilshire's.

²⁸⁷Peter Mathias, 'Agriculture and the Brewing and Distilling Industries in the Eighteenth Century', *Economic History Review*, 2nd ser., vol. V, 1952-53, pp. 250.

output for 1807-8 was 41,415 gallons. This is perfectly in line with his accounts for mid-1806.

By 1808, there were major breweries in each of the four mainland centres of population. According to David Dickenson Mann, 'Some very palatable beer is brewed in the settlement, at four extensive breweries; one at Sydney, one at Kissing Point, one at Parramatta, and the other at Hawkesbury'.²⁸⁸ Squire was at Kissing Point and in possession of the lease for the government brewery at Parramatta, which Rushton had held from 1806 to 1808. The Sydney brewery was probably a substantial operation owned by James Wilshire which was leased to Rushton shortly after the expiry of the government brewery lease in 1808. It was situated on High Street (modern George Street), about 300 metres south of the burial ground which marked the end of the main part of town. The Brickfields were another 600 metres south.²⁸⁹ How long Wilshire had operated the brewery before leasing it, or, indeed, whether he had operated it at all, is not known, but it certainly was quite new when Rushton leased it in May 1808.

This lease on the 'Brewhouse Malthouse Tan house and Kiln' was for a minimum of twelve months, with six months notice to quit, at £105 per quarter, the first payment probably being in advance as no security was entered into.²⁹⁰ The annual rent of £420 in cash, when compared with the rent for the government brewery of £120 in kind, suggests that Wilshire's was a substantial operation. Rushton advertised on 19 June 1808 that he had commenced brewing 'good strong beer at 2s per gallon, and fine table do. for private families at 8d per gallon,

²⁸⁸D. D. Mann, *The Present Picture of New South Wales* [John Booth, London, 1811, p. 43] Facsimile edition, John Ferguson, Sydney, 1979. Mann left for England in early 1809. SG, 19 February 1809, has a notice of his imminent departure. His book describes the colony as he left it. Mann was the Commissary's Clerk, and one of several witnesses requested by George Johnston to accompany him to England in order to give evidence in Johnston's defence of his conduct during the rebellion (Johnston to Lieutenant-Governor Paterson, 3 February 1809, HRA VII, p. 45).

²⁸⁹Wilshire's property is no. 86 on James Meehan's Plan of the Town of Sydney, drawn on 31 October 1807 (in HRNSW VI, p. 367). It is on the north-east corner of the intersection of modern George and Market streets.

²⁹⁰Agreement dated 9 May 1808, NSW Judge Advocates Office, Register of Assignments, No. 2, p. 11, no. 22, LTO.

bittered with hops only'.²⁹¹ Later, Rushton and Wilshire appear to have had a falling out, quite possibly over the lease of the brewery. They are listed for a hearing on or after 26 June 1809 by the Governor as Judge of the High Court of Appeal, having already appeared in the Court of Civil Jurisdiction.²⁹²

Andrew Thompson ran the Hawkesbury brewery, in the town of Windsor, using the equipment purchased from Governor King in May 1806. Thompson received this opportunity as a reward for his service in the great flood earlier in the year and for 'his general demeanor'.²⁹³ But the choice was probably influenced by the fact that Windsor was the only major settlement without a large brewery. Thirty-two kilometres north-west of Parramatta, Windsor and the surrounding district were reached by long journeys by road or water, the latter involving sailing north along the coast from Port Jackson to Broken Bay and then up the Hawkesbury River, a voyage of roughly 100 kilometres. To some extent, the Hawkesbury brewery had the natural protection of high transport costs, and may have operated in a separate market, although this protection would become less effective. By contrast, the other three settlements were relatively close to each other. Parramatta to Ryde is about eleven kilometres, and from Ryde to Sydney is another thirteen. There was a road and the Parramatta River linking the three settlements. Rushton's Parramatta brewery was supplying about 1,000 gallons a month to Sydney retailers by mid-1806 and no doubt Squire was similarly enthusiastic about supplying both Sydney and Parramatta from his Kissing Point brewery.

The larger brewers had the capacity to supply settlements beyond their immediate area. Squire and Rushton were competitors even though they were in different locations. There were other, smaller brewers who provided further competition. Of these, the most notable was Nathaniel Lawrence, whose brewery

²⁹¹SG, 19 June 1808.

²⁹²Government and General Order, 17 June 1809, AONSW, Col. Sec. SZ 993, pp. 66-7.

²⁹³General Order, SG, 11 May 1806.

would eventually become one of the three largest in the colony. Writing in 1820, Lawrence said he had been a resident for 23 years and a brewer for the last fourteen of them, 'being the first person who commenced that business in the Town of Sydney'.²⁹⁴ While his claim to have been Sydney's first brewer is late by over a decade, the rest of his account seems accurate. At first he was a brewing victualler – brewing beer for sale on his own premises – before expanding his operation into a common brewery in 1813. In 1808, however, he was still a small-time operator. A bill for spent grains of only £4 9s 6d paid by Blaxland on 18 June 1806 suggests Lawrence was brewing in the thousands of gallons annually but was operating at nothing like the level of Rushton and Squire.²⁹⁵

Another brewer operating at this time was Thomas Evestaff, whose property was described in 1811 as 'in the most desirable part of Pitt-street', consisting of a two storey brick dwelling and outbuildings including 'a capital malt-kiln, malt-house, brewery, with a spacious copper fixed, and all utensils complete, together with a granary capable of containing 1000 bushels of grain; [and] a capital covered well'.²⁹⁶ Evestaff had been in the colony since 1798 and had erected these buildings around 1806.²⁹⁷ There he engaged in general trade, selling, among other things, sieves.²⁹⁸ He was brewing in a small way in 1807 with a sale of 10s worth of grains paid by John Blaxland on 10 October 1807. His next bill, dated 11 January 1808, was a good deal larger, at £10 12s.²⁹⁹ Evestaff was still in business in early 1811, when he wrote to the Governor seeking a

²⁹⁴Memorial to the Judge Advocate, 23 February 1820, Wentworth Family Papers, ML, A764, pp. 149-50 (CY 727, pp. 315-6).

²⁹⁵A Statement of Capital advanced by John Blaxland in his concerns from the 3rd day of April 1807 to the 17th of September 1808, AONSW, Col. Sec. 4/1727, p. 210.

²⁹⁶SG, 17 August 1811.

²⁹⁷Petition of Thomas Evestaff for renewal of a lease, 13 January 1810, AONSW, Col. Sec. 4/1821 No. 105 (F3003).

²⁹⁸SG, 2 November 1806. The address was No. 3. See also SG 30 August 1807, where he advertises for a copy of Blackstone's Commentaries.

²⁹⁹Statement of John Blaxland, AONSW, Col. Sec. 4/1727, pp. 203, 205. While Blaxland bought his grains from Rushton and Evestaff, he and his brother bought their beer from John Curtis, see Statement of John Blaxland, p. 204; A Statement of Capital advanced by Mr Gregory Blaxland in his concerns from the 27th day of December 1806 to the 24th day of November 1807, AONSW, Col. Sec. 4/1727, p. 192.

renewal of his lease for No. 3 Pitt Street, describing himself therein as 'by profession a Brewer'.³⁰⁰ However, by the middle of the year he was looking to quit the colony. Having failed to sell his premises privately, he advertised in the *Gazette* on 17 and 24 August 1811.³⁰¹

In 1809 the industry had two well-documented new names. Enoch Kinsela began brewing in January 1809 selling strong beer at 2s per gallon and table beer at 1s 6d.³⁰² He was still in business at No. 5 Upper Pitt Street on 2 June 1810, when he 'acquaints his Friends and the Public in general, that he has now for sale a quantity of excellent Beer in bottles, at 8s per dozen' which is 'not inferior in strength to any beer imported in the Colony'. On 25 October 1809, a new brewery opened at the other end of Sydney, near Dawes's Point. Absolem West promised 'his friends and the Public in general' best strong beer at 4s a gallon, and best table beer at 2s.³⁰³ In time for Christmas, he was offering 'for Sale [for] the ensuing week, 20 or 30 Hogsheads of the best Strong Beer'.³⁰⁴ The sale of 1,000-1,500 gallons for the festive season may not be typical but still this was a brewery that presumably could produce several thousand gallons annually.

While these new brewers were establishing themselves, the two major brewers were strengthening their positions. Even though Squire divested himself of the government brewery, he was making considerable progress in his own brewery at Kissing Point and in the cultivation of the hop (for which see Chapter 6). After a year leasing Wilshire's brewery, Rushton moved on from Brickfield Hill to larger premises at 12 Hunter Street. Wilshire's was put up for a new lease, to take effect on 24 May 1809.³⁰⁵ The business comprised 'a Brew-House, Malt-House, and Malt-Kiln, with a Brewing Pan and other Brewing Utensils', plus a

³⁰⁰Memorial of Thomas Evestaff, 29 January 1811, AONSW, Col. Sec. 4/1726, pp. 23-5. Confirmation of the application was initialled by Macquarie.

³⁰¹See also Evestaff's letter to the editor of the *Gazette*, 15 August 1811, AONSW, Col. Sec. 4/1726, pp. 239-40. Evestaff gave notice of his intention to quit the colony on 31 August.

³⁰²SG, 29 January 1809.

³⁰³SG, 22 October 1809.

³⁰⁴SG, 17 December 1809.

³⁰⁵SG, 16 April 1809.

small house nearby. Wilshire offered that 'Any person wishing to take the same who may not be conversant in malting and Brewing, the Proprietor has no objection to give such needful instructions, as if pursued cannot fail of making good Beer'. It seems that no one took up the offer, and the brewery ceased to operate, as Wilshire devoted himself to building up his tannery, which was to become one of Sydney's largest manufactories

As argued briefly in Chapter 3, the evidence makes it hard to accept Walsh's view that brewing was retarded during the interregnum between the deposition of Governor Bligh on 26 January 1808 and the assumption of office by Governor Macquarie on 1 January 1810. Walsh argues that 'conditions were inauspicious' for brewing 'because the governing elite, the officer-trader monopolists, profited greatly by the importation and retailing of spirits'.³⁰⁶ The rebel administration was not notable for its attention to bureaucratic record keeping. Shipping records may have lapsed in 1809. Nevertheless, while Bligh felt that spirits imports increased, the available evidence does not support a marked increase in spirits imports on the one hand, or increased monopolisation of the spirits trade on the other. As for the brewing industry, far from going into a decline, it seems to have blossomed. At the very least, it is likely to have kept pace with population growth, which was rapid during the last two years of the decade. The total inhabitants of New South Wales and Tasmania rose from under 9,000 to over 11,500 inhabitants. The major brewers from before the rebellion continued in business. Thompson prospered at Windsor. Rushton moved to Wilshire's in Sydney and then to his own premises in the middle of town. Each move seems to have been commercially advantageous. Squire expanded his operation at Kissing Point and leased the government brewery in March 1808. The industry that Mann described at the end of 1808 had four large breweries, probably operated by these three men, to which we can add the breweries of Lawrence and Evestaff. Kinsela and West entered the industry in 1809. With the

³⁰⁶Walsh, *History of Manufacturing*, ANU, p. 25.

exception of West – who signed both the petition of 26 January 1808, imploring Major Johnston to depose Bligh, and the petition of 27 January which congratulated Johnston for his ‘manly and honorable interposition’ – none had any obvious connexion to the rebels.³⁰⁷ Thompson, indeed, managed an estate on Bligh’s behalf and was one of the Governor’s most notable supporters before and after his deposition.³⁰⁸ There is no evidence that the rebels tried to deter the production of beer, reinforcing a point made by some historians that for much of the colony after 26 January 1808, it was business as usual.

The Macquarie Years: 1810-1821

Lachlan Macquarie arrived at the very end of 1809, determined to make a clean sweep of the administration of New South Wales. Shortly after assuming command, he announced his intention to reduce significantly the number of retail wine and spirit licences, and to increase the licence fee from £3 to £20, in order to promote morality and industry.³⁰⁹ In June 1810, 50 beer only licences at £5 each were issued, in order to promote the consumption of beer.³¹⁰ And on 25 January 1811, it was ‘further notified that in future every Person wishing to carry on the trade of brewing of beer, Porter or Ale, must obtain a License for doing so’, at a cost of £25.³¹¹ The effect on the brewing industry of licensing and other government policies are discussed at the end of this chapter and in Chapter 5. For now, the importance of the decision to license brewers is that for the first time official information is available about the names and number of brewers in the colony, although care must be exercised in the use of the sources for this information. Walsh uses announcements of licensees appearing in the *Gazette*,

³⁰⁷For the petitions and the lists of signatories, see HRA VI, pp. 240, 375, 723 and 732.

³⁰⁸See, for example, HRA VI, pp. 366, 374, 574 and 732.

³⁰⁹SG, 17 February 1810. Governor King had set licences at £3 by his order of 27 October 1800 (HRA III, pp. 35-6).

³¹⁰SG, 23 June 1810. See also Table 5.1.

³¹¹SG, 26 January 1811.

together with the evidence of D'Arcy Wentworth to the Bigge Inquiry, to arrive at the number of breweries in 1811 and 1815-21. On the basis of these figures, Walsh argues that brewing at the time

continued to be a hazardous occupation, depending to a large degree on the seasons, the grain market, the supply of hops, and, of course, the availability and price of imported beer and porter, which was preferred to the local product. The instability of the industry is evidenced by the fact that of the eleven different breweries operating at any one time or another, only four on an average were brewing in any one year; only one brewer, Thomas Rushton, held a licence for the seven years, 1815-1821.³¹²

But the evidence which Walsh presents is imperfectly assembled and very partial. As well as leaving a gap of three years, the *Gazette* announcements are only for licences paid for in the first quarter. Far more complete are the records of the Police Fund into which the licence fees were paid. These accounts were published quarterly in the *Gazette* for most of Macquarie's term of office. The Treasurer of the Fund was D'Arcy Wentworth, whose own handwritten accounts of the licences are available in the Wentworth Papers in the Mitchell Library. Petitions for brewing licences and official memoranda provide further information (see Table 4.1). Using the wider range of licensing information gives a different story. While Walsh does not miss the names of any of the brewers operating in the 1810s, the number of breweries operating in any year is one or two more than reported in the licence notices he uses. Of the eleven brewers identified by Walsh for 1811-21, three engaged continuously or almost continuously in the business for the whole period. These men were already experienced and well-established brewers: James Squire had been brewing since 1791, Thomas Rushton since 1804

³¹²Walsh, *History of Manufacturing*, ANU, pp. 26-7. The announcements cover 1811, 1815-8 and 1820-21. Strictly speaking, Walsh does not know the identity of the licensees for 1819 as Wentworth's evidence to Bigge only gives the number of licences issued.

and Nathaniel Lawrence since 1806. Of the others, one – Daniel Cooper – entered the industry only in 1821 and established what would be a major brewery in the 1820s; six were engaged in the industry without a break for up to four years; and only one of the eleven – Michael Byrne – was in and out of production, and this was due largely to ill-health. The licensing record does not suggest an unstable and primitive industry in which small brewers intermittently engaged in production when the conditions were favourable. In particular, the brewing industry was not a residual activity, undertaken when surpluses of grain allowed or the supply of imported porter was low. Rather, it was a quite stable industry founded on three major brewers who expanded their businesses throughout the 1810s, and whose breweries were, by colonial standards, large concerns. Around this stable core were brewers who failed, but these were not small-scale and intermittent marginal producers either. Rather, they were competent businessmen, with experience and capital, who entered the industry on a relatively large scale, and exited for commonplace commercial reasons.

The Big Three

The father of Australian brewing – James Squire – had been in the business for twenty years when licensing was introduced in 1811, and while there are some gaps in the licensing records, it is clear that he operated continuously throughout Macquarie's governorship. He is one of the four named licensees in 1811. No names are given in the available licensing records for 1812-14, but Squire's progress during this period is reported in two *Gazette* articles on the success of his hop plantation.³¹³ It seems unlikely that he ceased brewing just when his hop plantation finally began producing in large quantities. He is listed as a brewing licensee in 1815, but does not appear by name again in the sources used by Walsh until 1820. In 1818, however, he appears in a later and revised notice of all retail

³¹³SG, 21 March 1812; 15 May 1813.

and brewing licensees. The notice used by Walsh appeared on 4 July 1818; this was repeated on 11 July (in a *Gazette* mistakenly dated 10 July). On 18 July, the list was reprinted again, this time with the addition of Squire. In 1816 and 1817, when his name does not appear in the public notices of licensees, there is a late payer identified in the Police Fund accounts who is almost certainly Squire. An explanation for this tardiness in 1816 is given in a letter from J. T. Campbell, the Colonial Secretary, to the Chief Magistrate of Police, D'Arcy Wentworth, which accompanied the memorials and the Governor's list of licences to be granted.

There is one Exception to be made namely in the Case of Squires at Kissing Point where application is only made for a Brewing Licence whilst it is notorious that he is in the constant habit of Selling Spirits as well as Beer. It is therefore the Governor's desire that unless he takes a licence for the sale of spirits that he shall not obtain one for Brewing.³¹⁴

It is almost certain that Squire took out the spirit licence for his tavern, and received the brewing licence notified in the Police Fund account in the *Gazette* of 11 May 1816. Squire may have been an irritation to officials, but he was in business nevertheless, and this is confirmed in his 1819 petition for a renewal of his licence, in which he says simply 'That your petitioner is a Licensed Brewer of Malt Liquor and as been so for Many Years'.³¹⁵ From these sources, and from the evidence of the considerable progress in his hop field and brewery, it seems that Squire was brewing throughout the period.

Just how much progress Squire had made was revealed in 1817, when the 63 year old put up for private sale most of his considerable landholdings and his brewery, which by then included a 'Brewhouse, and Cellar, with two Coppers and

³¹⁴15 February 1816, AONSW, Col. Sec. 4/3494, p. 366.

³¹⁵Memorial dated 3 February 1819, Wentworth Family Papers, ML, A764, p. 6 (CY 727, p. 170). Next year, he repeated the point that he had 'ad a brewing Licence a Great Many years', Petition dated 7 February 1820, Wentworth Family Papers, ML, A764, p. 71 (CY 727, p. 235).

Coolers, together with all the Utensils requisit to carry on the Brewing Business, having a good Malt-house, with Kiln 80 feet long'.³¹⁶ This was a large operation, the centre of his business, next to which were 'four acres of hop grounds in excellent condition'. Squire's brewery was comparable in size to a successful small commercial brewer in late Georgian England. For example, Benjamin Wilson's 'modest brewery at Burton-on-Trent' had, in 1798, 'several small malt offices', of which his 'New Malt House' was 'an average, fairly large unit in the industry', with a kiln 30 feet by 18 feet, and 9 feet high.³¹⁷ While we do not know the breadth of Squire's kiln it was very likely larger in area than the one in Wilson's 'New Malt House'.

Squire failed to sell the brewery or land and it can only be concluded that he was asking more than anyone was willing to pay. He decided to make the best of it and expanded his operation even further. In his 1820 petition for a licence, Squire stated that he had 'lately Enlarged His Premises to Carry on Business in the above Trade... to a much Larger Extent'.³¹⁸ Later in the year, he advised those engaged in the river trade that he could no longer provide accommodation 'as I have considerably extended my Brewing and Farming Business'.³¹⁹ At the end of 1820, Squire gave evidence to Commissioner Bigge which reveals how his business had grown. He was selling about 2,000 gallons of beer a week; buying grain from Hawkesbury, and Port Dalrymple in Tasmania, as well as supplying his own; and had seven or eight acres under hops, and had recently supplemented his own production with a single purchase of four tons of imported hops costing £1,680.³²⁰ The following year he established a number of his own beer houses, as did the other leading brewers.³²¹ Like his kiln, Squire's output of nearly 3,000

³¹⁶SG, 3 May 1817; repeated 10 and 17 May.

³¹⁷Mathias, *Brewing Industry*, p. 407.

³¹⁸Petition dated 7 February 1820, Wentworth Family Papers, ML, A764, p. 71 (CY 727, p. 235).

³¹⁹SG, 27 May 1820.

³²⁰Evidence given 29 December 1820, in Ritchie, *Oral Evidence*, p. 117.

³²¹The Memorial of the Brewers of Sydney to Sir Thomas Brisbane, undated 1822, AONSW, Col. Sec. 4/1763, pp. 149-50a. For a discussion of this, see Chapter 5.

barrels a year is comparable to that of a small to medium sized common brewer in turn-of-the-century England. While dwarfed by the largest London breweries, which produced over 100,000 barrels each, Squire's would not have been out of place among the more successful and expanding provincial breweries in larger towns like Norwich, which 'were doing a trade of several thousands of barrels annually' and owned their own maltings and public houses.³²² In New South Wales in 1820, with a population of 28,000 (excluding Tasmania), Squire's was a large and renowned business which produced nearly four gallons of beer for every man, woman and child. It is impossible to agree with Walsh that in 1820 the brewery was still 'tied closely to the rural framework, small in its scale of operations, and intermittent in working' or even that such a description had been accurate in 1810.³²³ Two pictures from about 1820 of Squire's brewery, which show a complex of substantial one and two storey buildings, confirm the impression gained from the documentary evidence that Squire's was a large, permanent commercial development which had been built up over many years.³²⁴

Rushton's progress is not as well documented as Squire's, but he was a quiet achiever none the less. Like Squire, he was one of the four named brewers licensed in 1811. The Police Fund accounts for 1812-14 do not give the names of licence holders, but Rushton was identified as a brewer in the *Gazette* on 15 May 1813. From 1815 to 1822, the year of his death, Rushton is in all of the available lists of licensed brewers. This led Walsh to identify him as the only brewer to hold a licence continuously for 1815-21, and as the only exception to the pervasive instability in the industry caused by interruptions to the supply of inputs. This is incorrect on both counts. Rushton apparently did not take up a licence in 1819. The explanation is given in his application for a licence in early 1820.

³²²R. Wilson, 'The British Brewing Industry Since 1750' in L. Richmond and A. Turton (eds), *The brewing industry: a guide to historical records*, Manchester University Press, 1990, p. 2.

³²³Walsh, *History of Manufacturing*, ANU, pp. 28-9.

³²⁴One is a crude, unsigned oil painting in the Mitchell Library, reproduced in Walsh, *History of Manufacturing*, p. 30. The other is the view of Squire's property in Lycett, *Views in Australia*.

In 1818 my Hop plantation Intirely failed owing to the long continued Rain – from latter end of November to late in February and for want of Hops have done little Brewing since which has distressed me much – But now having plentiful crop shall have it in my power to make good Beer and recover my lost customers – and shall continue brewing with Malt only – which will encourage agriculture.³²⁵

Rushton provides the only known instance in the 1810s of a brewer ceasing to operate because of difficulties in securing inputs. Unlike Squire in 1819, he appears not to have resorted to a large purchase of imported hops to maintain production. Whatever his particular reasons for this decision, the recovery of his hop field and the large flow of hops into the colony in 1820 allowed Rushton to resume quickly his place as one of the colony's largest brewers.

Relatively little is known about the scale of Rushton's brewery, but it seems reasonable to assume that he continued to produce in the tens of thousands of gallons, as he had at both the government brewery and Wilshire's. His hop field, begun at the same time as his Hunter Street brewery, had become the largest in the colony by the end of the 1810s. His crop in 1813 of 1,080 lbs was sufficient for 17,280 gallons of beer at a hopping rate of an ounce a gallon, but Rushton used imported hops as well, and his beer production would have exceeded this figure (see Chapter 6). In 1816, Rushton was selling table beer at 1s a gallon for bulk orders of four gallons or more, 'warranted to keep, and equal in goodness to the Beer in England'.³²⁶ This was a quite reasonable price for colonial beer at the time (see Table 6.2) and Rushton does appear to have aimed for a better than average quality, including persisting in the use of barley for at least part of his

³²⁵Petition of 1 March 1820, Wentworth Family Papers, ML, A765, p. 7 (CY 727, p. 364).

Rushton appears to mean the 1819 crop, which would have been harvested in March. The rains which ruined the crop fell from November 1818 to February 1819. For further discussion of this incident, see Chapter 6.

³²⁶SG, 16 April 1816.

mash. Rushton was one of the four leading brewers who acquired their own retail premises, especially in 1821, and petitioned Governor Brisbane on the subject in 1822. The other three were Squire, the newcomer, Middleton, and Lawrence.

Nathaniel Lawrence was the third major brewer during the Macquarie era. He had arrived in the colony in or about 1797, served seven years in the government store at Parramatta, and received a conditional pardon from Governor King. Shortly after, he set himself up in business in premises in Upper Pitt's Row which he would occupy until his death in 1826.³²⁷ His remission was extended by Lieutenant-Governor Paterson, and in 1810 he applied to Macquarie for a further renewal.³²⁸ In the same year he took up one of the new retail beer licences.³²⁹ The following year he renewed his retail licence and apparently received one of the two additional brewing licences issued that year.³³⁰ In applying for a renewal for his brewing licence in 1820, he stated 'That your petitioner has long had the indulgence of a Licence for Brewing of beer at the Brew House situate in Market Street'.³³¹ In a later petition he is more definite, stating that he had been brewing for fourteen years and had held a brewing licence 'since it was deemed necessary by His Excellency the Governor to grant them'.³³²

At first, Lawrence operated as a brewing victualler, selling his own beer over the counter and in small quantities for consumption off the premises, as well as making bread. The nature of his business is shown when he tried to sell up in April 1811. His advertisement described No. 34 as a 'valuable and desirable situation', comprising a house, 'commodious Bake-house, large Granary', stable,

³²⁷The address became 34 Pitt Street in 1811, although it was sometimes given as Market Street as the building was on the corner of the two streets. See, for example, an undated petition from 1821 or 1822, Wentworth Family Papers, ML, A765, p. 199 (CY 727, p. 560).

³²⁸Humble Petition of Nathaniel Lawrence to Gov. Macquarie, 7 February 1810, AONSW, Col. Sec. 4/1847, pp. 135-135a (F3166).

³²⁹SG, 21 July 1810.

³³⁰See SG, 16 March 1811 for the retail licence, and the April and September Police Fund accounts for the brewing licences.

³³¹Petition of 9 February 1820, Wentworth Family Papers, ML, A764, p. 113 (CY 727, p. 277).

³³²Memorial to the Judge Advocate, 23 February 1820, Wentworth Family Papers, ML, A764, pp. 149-50 (CY 727, pp. 315-6).

‘an excellent well’, ‘a large Copper Boiler fixed in brick work in the Bakehouse, large enough to contain 70 gallons of beer, and every convenience fit for the brewing and baking line’.³³³

Lawrence’s attempted sale may have been prompted by the introduction of the brewing licence in 1811. When it did not eventuate he took out the licence and set himself to expanding his business. Early in 1813 he was granted a free pardon.³³⁴ Shortly after he announced the opening of his ‘WHOLESALE BREWERY’, where the public ‘may be supplied with excellent Ale in any Quantity, at a very reasonable Price’.³³⁵ Early in 1814 Lawrence announced his intention to quit the colony in the *James Hay* which sailed on 30 May.³³⁶ If Lawrence did go to England, he had returned to No. 34 by August 1815. Interestingly, in 1815, his wife, Margaret Lawrence, had received a beer licence in Sydney.³³⁷ Exactly what was going on is unclear, but these were trying times for Nathaniel Lawrence. He advised the public that no credit was to be given on his account without his written order.³³⁸ The following year, he made his point clearer still, warning the colony’s inhabitants ‘not to CREDIT my Wife, Margaret Lawrence, after this Advertisement, as I will not be responsible for any Debts she may contract’.³³⁹

Despite his personal problems, Lawrence battled on. While he was not one of the five named brewers in 1815, he is likely to have been one of the two brewers who took out six month licences in the second half of that year.³⁴⁰ Perhaps he had left his business in the care of his wife while he went to England to purchase equipment and materials. Certainly, he held a brewing licence from

³³³SG, 6 April 1811; repeated 13 April.

³³⁴Petition of Nathaniel Lawrence for a pardon, 4 January 1813, AONSW, Col. Sec. 4/1849, p. 12 (F3172). Granted, initialled L. McQ.

³³⁵SG, 6 March 1813.

³³⁶SG, 29 January and 5 February 1814; Cumpston, *Shipping*, p. 89.

³³⁷SG, 8 April 1815.

³³⁸SG, 19 August 1815.

³³⁹SG, 28 September 1816.

³⁴⁰SG, 14 November 1815 and 10 February 1816.

1816 to 1822.³⁴¹ In early 1820 Lawrence valued his recent expansions at £1,600, including a granary, drying house and malt house. This was on top of his existing buildings and equipment, stocks of material, and financial reserves for acquiring new stocks. Lawrence's was clearly one of the colony's larger breweries. W. C. Wentworth advised at the time that a brewer needed capital of £5,000 to establish himself seriously in the colony.³⁴² But Lawrence's latest investments were only part of a grander vision, for he was 'about to proceed to England per ship Admiral Cockburn for the express purpose of purchasing Hops and utensils for the Establishment of a Porter Brewery in this Colony'. He had appointed an agent to operate the brewery in his absence.³⁴³ Whether any of this dream came off is not known, but 'Natty's Brewery' certainly stayed in production and was regarded as something of an institution by the time of its owner's death in 1826.³⁴⁴

Three Failures and a Moderate Success

Others, of course, did not fare so well. West, who had been brewing since late 1809, was one of the four licensed brewers listed in the *Gazette* of 16 March 1811. But he appears to have suffered from a widespread and abiding problem in the colony: the recovery of debt. On 14 July 1810 he warned those indebted to him 'to step forward and settle their accounts immediately, to prevent me from having recourse to legal measures'. The following week he repeated his threat to take 'coercive measures' against 'all those Persons who received Beer' from him

³⁴¹Announcements of licences in SG for 1816-8 and 1821; List of Applicants for Renewal of Spirit Licences in Sydney for the Year 1819, 15 February 1819, AONSW, Col. Sec. 4/3499, pp. 318-20 (6006; also in COD 198, p. 27); Petitions of Nathaniel Lawrence, 9 and 23 February 1820, Wentworth Family Papers, ML, A764, pp. 113, 149-50; Brewing Licences for 1822, Wentworth Family Papers, ML, A765, pp. 141-3 (CY 727, pp. 502-4).

³⁴²W. C. Wentworth, *Statistical, Historical and Political Description of the Colony of New South Wales and Its dependent Settlements in Van Diemen's Land* [G. & W. B. Whittaker, London, 1819, p. 420] Facsimile edition, Griffin Press, Adelaide, 1978.

³⁴³Memorial to the Judge Advocate, 23 February 1820, Wentworth Family Papers, ML, A764, pp. 149-50 (CY 727, pp. 315-6).

³⁴⁴SG, 19 January 1826.

'in December last, on credit'.³⁴⁵ West had been in business only a few weeks when he had mounted his sales campaign for Christmas 1809, with 1,000 to 1,500 gallons of best strong beer, worth £200 to £300, on three months credit 'given on approved security'.³⁴⁶ His offer had clearly been enthusiastically taken up, leaving him in a difficult position more than six months later. He would still be trying to recover this debt in 1813, and may have added to his problem by continuing to sell his beer on credit. On 30 March 1811, he advertised in poetic form his problem with those who owed him money from 1810.³⁴⁷

Absalom West does hereby request,
that all those who last Year took on credit his Beer,
whose Flavour and Strength, to Perfection at length,
by Labour and Thought 'tis acknowledged he's brought,
their Debts will discharge, to let him at large
from Claims which no doubt, every Brewer of Stout
would his Conscience acquit, if his Assets permit.

It is therefore declared, that no one will be spared
from Appearance at Court ('tis the latest Resort),
who do not to Absalom's quickly repair.—
No Favour to any one Soul will he shew:
So they'd better save Trouble – and pay what they owe.

Raising the matter of unpaid debts, and his consequent difficulties in acquitting his own debts, may have been unwise. The following week he took out another advertisement in which he responded to 'some insinuations' which had

³⁴⁵SG, 14 and 21 July 1810.

³⁴⁶SG, 17 December 1809.

³⁴⁷The original is not set in this form.

resulted in the rejection of several of his promissory notes. He assured everyone holding such notes 'that he is capable of honoring them' and urged anyone with apprehensions on this score to present them to him.³⁴⁸ By the end of 1812, West was advertising for private sale his 'desirable, well known House and Premises, most delightfully situate Nos 1 & 2 Cambridge-row, Cambridge-street, at Dawes's Point', including 'Outbuildings, Malt-houses, Brew-house, Malt and Grain Lofts, Malt kiln, Cellar, Stables, Yards, and Garden'. It is a sign that he had not learned his lesson about giving credit, or that he was desperate to sell, that he advised that 'Twelve Months Credit will be given for the greater part of the Purchase Money, or the whole if required'.³⁴⁹ Despite this generous offer, a sale did not eventuate and on 30 January 1813 West gave notice of the reopening of his Blue Lion Inn in Cambridge Street. Debt continued to occupy his attention, and shortly after he again warned 'all those Persons who stood indebted to him in December 1809' to come forward and pay.³⁵⁰ It seems that West continued to struggle: a few months later he was again putting up his premises for auction.³⁵¹ On 29 May he announced his intention to depart the colony, though this was a long time coming.³⁵² He advertised for debts to be settled, on 14 August 1813, and again on 4 December. On 26 February 1814 he warned all 'persons against whom he obtained Judgments in the late Court of Civil Jurisdiction' to settle their debts before 21 March.³⁵³ Finally, in September 1814, he was set to depart.³⁵⁴ Thomas Rushton was appointed his sole agent 'during his absence'.³⁵⁵

³⁴⁸SG, 6 April 1811; repeated 13 April.

³⁴⁹SG, 17 October 1812.

³⁵⁰SG, 30 January 1813; repeated 13 February and 6 March 1813. West was still threatening 'coercive measures' when the civil court was next in session.

³⁵¹SG, 10 April 1813; an advertisement on 17 April adds 'and every Brewing Utensil'.

³⁵²SG, 29 May 1813; repeated 5 June.

³⁵³SG, 26 February 1814.

³⁵⁴SG, 10 September 1814.

³⁵⁵SG, 17 September 1814. As West's agent, Rushton found himself in dispute with George Crossley about whether the vessel *John Palmer* was mortgaged to West (SG, 17 and 31 December 1814).

It is unlikely that West had a brewing licence after 1811. From 1809 to 1811 he operated as a brewing victualler from his licensed premises in The Rocks. The sale of beer in bulk in 1809 was clearly a major undertaking for him, and his difficulty in recovering debts arising from this venture undermined his financial position. His failure as a brewer, however, had nothing to do with difficulties in securing inputs or competing with imported porter. Rather, West was a small businessman brought undone by his own decisions and in particular by his bad luck or bad management in advancing credit to his customers.

Things went somewhat better for the other brewer known to have entered the industry in 1809. On 27 July 1811, Kinsela had advertised himself as 'Licensed Brewer, Castlereagh Street'. This was probably the same premises that he called No. 5 Upper Pitt Street in 1809. The two streets are roughly parallel and Kinsela's brewery was on a block fronting both streets. In this advertisement Kinsela wanted to settle accounts by 30 August and announced his preparedness to deduct 25 per cent from debts owed to him 'rather than have recourse to coercive measures'.³⁵⁶ This problem, however, was insufficient to deter Kinsela from investing further in the industry over the next year and a half, during which he established a hop field and a new brewery. It is possible that he did not hold a brewing licence in 1812, when most of this development took place. On 20 March 1813 Kinsela announced in the *Gazette* the completion of his new brewery at No. 8 Clarence Street, where he would sell 'good strong Beer warranted to keep sound for Six Months, perfectly clear, fine, and free from any nauseous flavour'. In the same advertisement he advised agriculturalists that he had several thousand hop cuttings of great strength and in full bearing. They were invited to visit his plantation to see his success in the short time since they had been transplanted on 4 September 1811.

Despite his expansion, or perhaps because of it, Kinsela's creditworthiness was impugned in 1813, as West's had been in 1811. On 17 July 1813 he offered

³⁵⁶Repeated in SG, 3 August 1811. On 20 July 1811 he had asked that claims be presented to him.

£5 to anyone who could provide evidence as to the identity of whoever had started the rumour that he had sold his new premises in Clarence Street, and he reassured the public that his 'Current Notes' for 6d to 2s 6d would be received by a number of businessmen including S. Lord, M. Byrne, N. Lawrence and T. Clarkson. The following week, it was back to business, reminding farmers that he could supply best quality 'Grape Hop', 'as the approaching Season advances for the HOP PLANT to be removed'.³⁵⁷ By 20 November 1813, Kinsela was calling for promissory notes to be brought in for currency and for those who owed him for beer to settle their accounts. It seems that Kinsela did not take out a brewing licence in 1814. His 'truly desirable and eligible HOUSE and PREMISES, situate No. 8 Clarence-street, consisting of brew house, stable, and kitchen, all in thorough repair, with a well constantly supplied with pure water', came up for sale on 13 April 1816. Its proprietor, George Beldon, was quitting the colony. The property was still for sale on 28 December. On 4 April 1818, it was up for sale again, its proprietor, T. Wilford, having used it as a bakery.

Unlike West, Kinsela was a common brewer whose success allowed and encouraged him to build a new brewery and establish his own hop field. While following the path taken by Squire, Rushton and Lawrence, he did not emulate their success. His exit coincided with the coming on stream of a similarly ambitious but unsuccessful venture. Gregory Blaxland had arrived in the colony in 1806 as a free settler with considerable financial capital and a large cargo of equipment and stores.³⁵⁸ Like Kinsela, he had taken considerable care in establishing his brewery and hop field. He began work in 1811 or 1812, before applying for a brewing licence in early 1814, which was 'favourably considered' and granted.³⁵⁹ Blaxland's brewery was part of his Brush Farm in modern Eastwood, about four kilometres to the north-west of Squire's brewery on the

³⁵⁷SG, 24 July 1813; repeated 31 July.

³⁵⁸A Copy of different Articles brought to the Colony in the Ship Brothers by G. Blaxland, AONSW, Col. Sec. 4/1727, pp. 178-9.

³⁵⁹W. Cox, Evidence to J. T. Bigge, 25 November 1819, ML, BT 5, p. 1982; Campbell to Blaxland, 8 February 1814, AONSW, Col. Sec. 4/3493, p. 32.

Parramatta River. Like Squire, Blaxland looked beyond his immediate neighbourhood for his market. In June he advertised that orders for his beer and yeast would be taken at 15 Clarence Street, Sydney.³⁶⁰

Everything was going to plan. Blaxland described his success in cultivating the hop and brewing 'to a comparative degree of perfection'.³⁶¹ In August 1814, he advertised 'FIFTEEN THOUSAND HOP SETS FOR SALE at sixteen shillings per Hundred, warranted of the best sort in the Colony'.³⁶² He renewed his licence in 1815 and 1816 and, according to a contemporary, was doing well, selling his beer at the quite high price of 3/- per gallon to the trade and more to individuals, before the quality of his beer fell off and he lost his custom.³⁶³ He did not renew his brewing licence in 1817. Blaxland would later confirm the difficulties he found in brewing on a large scale. In particular, he argued, the climate made it hard to brew beer that would keep or 'bear carriage in the hot sun'.³⁶⁴ He was not alone in voicing these concerns, but 'the big three' persisted and succeeded, as did Blaxland himself for three years. Blaxland had capital and business ability, but he was simply unable to get the right mix of quality and price.

The story of Michael Byrne (or Burn) was altogether different to Blaxland's. He came as a convict in the ship *Minerva* in 1800 and spent some time on Norfolk Island before returning in February 1805, having served his term of transportation. In that year he purchased a block at the corner of Pitt and King streets where eventually he would build a dwelling of stone and brick and extensive back premises including a 'Brewery Malt & Kiln house'.³⁶⁵ Other documents give the address as the Brewery Arms, No. 19 Pitt Street.³⁶⁶ These

³⁶⁰SG, 4 June 1814; repeated 18 June.

³⁶¹Memorial, No. 40, 3 July 1814, AONSW, Col. Sec. 4/1730, pp. 166-7.

³⁶²SG, 26 August 1815.

³⁶³W. Cox, Evidence to J. T. Bigge, 25 November 1819, ML, BT 5, p. 1982.

³⁶⁴Blaxland's Memorial to Commissioner Bigge, 2 January 1821, ML, BT 25, pp. 5537-8.

³⁶⁵Humble Memorial of Michael Byrne to the Colonial Secretary, 6 November 1823, AONSW, Col. Sec. 4/1834A No. 52A (F3061).

³⁶⁶Memorial of Michael Byrne, May 1825, AONSW, Col. Sec. 4/1840C No. 101 (F3122);

developments were over a number of years, interrupted by a conviction for illicit distilling and recurring ill-health.

Byrne and an accomplice, Matthew Sutton, were sentenced by the Sydney Magistrates in September 1805 for possession of a still and a quantity of poteen. They and Michael Hayes, who was sentenced by the same court for a similar offence, were admitted to bail, failing which they were to stay in prison until they could 'be sent to another settlement within the Limits of this Territory'.³⁶⁷ Byrne probably went with Hayes to Norfolk Island, where Hayes remained in 1806 and 1807, before being absolutely pardoned by Lieutenant-Governor Foveaux in 1808, on account of his good conduct.³⁶⁸ Byrne, however, was back in Sydney by early 1806, as the lessee of the Government salt pans. This was despite Governor King's express direction that Byrne was not to be allowed to return to Sydney and despite his abiding concern that Byrne might engage in illicit distilling.³⁶⁹ The three year lease for the salt pans included a clause that Byrne 'shall not at any time whatever use or work or cause to be used or worked either by himself or any other person whatsoever within the Premises aforesaid any Still or Stills for the Distillation of any kind of Spirits or strong Drinks whatsoever'. He also entered into a large security of £500.³⁷⁰ Byrne did not stay long it seems; by early 1807, Kinsela was the manager of the salt works.³⁷¹ From his record, then, it is clear that Byrne had capital, and some expertise in simple manufacturing processes.

Memorial of Michael Byrne, 3 February 1820, Wentworth Family Papers, ML, A764, p. 34 (CY 727, p. 198).

³⁶⁷SG, 29 September 1805.

³⁶⁸For Hayes's account, see his interesting letters to T. Jamison at Sydney, ML, AR46/1-4 (CY 2160, pp. 33-51); Return of Prisoners absolutely and conditionally pardoned by Lt Gov. Foveaux from 31st July 1808 to January 1809, AONSW, SZ 760, p. 133b.

³⁶⁹In regard to the first matter, see P. G. King to Captain Piper, Commandant of Norfolk Island, 30 September 1805, ML, Safe 1/51, pp. 42-3. King instructed Piper that 'Burn may leave the Colony altogether being a Free man'. This was not the case for Hayes and Sutton, who were conditionally emancipated life convicts.

³⁷⁰Agreement for renting the Government Salt Pans at Sydney, enclosed in King to Camden, 15 March 1806, HRA V, pp. 669-70.

³⁷¹SG, 1 February 1807.

King's willingness to rescind his own order on Byrne, and to lease the salt pans to him, show that Byrne's abilities were recognised by others.

By 1810 Byrne appears to have been operating as a baker and perhaps as a brewer from his Pitt Street premises.³⁷² His 1820 petition states that he had received a licence from Governor Macquarie for eight years 'for Brewing of Malt Liquor and the Selling and Vending of the same Wholesale and Retail and for the Selling and Vending of Spirituous Liquor'. For the last two years he had suffered 'severe sickness and bodily infirmity' and so had discontinued his licences but now wished to renew both brewers and spirits vendors licences.³⁷³ His 1822 application for brewing and spirits retailing licences only speaks of having held a spirits licence 'for several years'.³⁷⁴ An application in late 1825 for a licence to distill states that he had not brewed for about two years, but had held a brewing licence for eleven years before that.³⁷⁵ These statements make up a somewhat confused picture. He appears to have begun brewing under licence in 1812 or 1813. We know from public announcements that Byrne held licences in 1815 and 1820-21. Byrne himself says that he did not hold licences in 1818 and 1819 due to ill health so that his claims to have held licences for eight and, later on, eleven years should be taken to mean that he first held a brewing licence eight and then eleven years ago. He may also have confused retailing and brewing licences in his 1820 petition. While it is quite possible that Byrne received one of the five licences issued in 1812, he almost certainly did not hold one of the three licences issued in 1813. He was again in production in the mid-1810s, out of production in 1818 and 1819, and then in production in 1820 and 1821. While he applied for a brewing licence in 1822, he was not on the list of nine applicants for

³⁷²SG, 7 July 1810, advertises for the recovery of a stolen cracking mill. Byrne may have been grinding grain for flour or cracking malt for grist, or both.

³⁷³Memorial of Michael Byrne, 3 February 1820, Wentworth Family Papers, ML, A764, p. 34 (CY 727, p. 198).

³⁷⁴4 February 1822, Wentworth Family Papers, ML, A765, p. 71 (CY 727, p. 426).

³⁷⁵Memorial of Michael Byrne of King Street corner of Pitt Street Sydney to Lieutenant-Governor Stewart and the Council, 6 December 1825, AONSW, Col. Sec. 4/1789, pp. 32-32b.

consideration prepared on 18 February.³⁷⁶ He may have brewed in 1823. The extent of his brewing business is unknown, but certainly his business in general was successful enough for him to put forward a convincing proposal for establishing a distillery in 1825. Alone among brewers of the time, Byrne went in and out of production several times, but this seems to have had nothing to do with the availability of inputs. The harvests of wheat and maize at the end of 1812 and in the first half of 1813 were so abundant that farmers were left with a considerable quantity of grain on hand for which there was no market.³⁷⁷ Prices of grain fell to the extent that a man could not exchange half a bushel of wheat for a pound of sugar, according to William Cox.³⁷⁸ The chief cause of Byrne's chequered brewing was ill-health, a reminder that the success of a closely managed sole proprietorship depends heavily on the owner's health and stamina.

Windsor

The other three entrants in the 1810s were all in Windsor, to the north-west of Parramatta. Windsor had got its own large brewery in 1806 when Andrew Thompson bought the second set of brewing utensils imported by Governor King. After his death on 22 October 1810, Thompson's various properties were put up for lease for two years, including the salt works at Scotland Island in the Pittwater, and 'a large convenient Brewery, at the Green Hills, on the Bank of the South Creek, with Malt-kilns, Granary, Cooperage, large and useful Utensils for prosecuting the Brewing Business in an extensive line'.³⁷⁹ A fortnight later, the notice had changed, offering the brewery for sale by auction rather than for lease.³⁸⁰ The brewery and utensils, with a dwelling, on one and a quarter acres of

³⁷⁶Wentworth Family Papers, ML, A765, pp. 143-5 (CY 727, pp. 502-4).

³⁷⁷Macquarie to Bathurst, 28 June 1813, HRA VII, p. 708.

³⁷⁸Evidence to J. T. Bigge, 25 November 1819, ML, BT 5, p. 1977.

³⁷⁹SG, 8 December 1810. The entrepreneurial Thompson was only 37 (SG, 27 October 1810).

³⁸⁰SG, 22 December 1810. The auction was to be held on 27 December.

land, were again put up for auction in October 1812. The sale date was 9 November, for possession on 1 February 1813, before the next licensing round.³⁸¹ It did not sell and was again offered for lease, for one year, on 5 February 1814.³⁸² On 23 December 1815, the Deputy Commissary announced that all of the brewing utensils in Thompson's brewery were for sale, the building having been bought for conversion to a public hospital. Among the utensils were three large mash tubs, a cooler, a yeast tray, pumps, a large cistern for steeping malt and a large copper 'that will contain upwards of 160 Gallons'. Buyers had until 24 January 1816 to purchase privately, when the remainder would be sold by public auction.³⁸³ The equipment did not sell, and it was reoffered for sale in March, with the large copper now estimated to hold between 300 and 400 gallons.³⁸⁴ John Howe explained that the failure to find a buyer for the brewery was because 'it was too large a concern for most of the persons near this place'.³⁸⁵

Windsor was however served by local breweries for much of the 1810s. Henry Kable took up one of the four licences notified in the *Gazette* on 16 March 1811. On 28 September 1811 he and his partner, Richard Woodbury, advised

Settlers on the Banks of the Hawkesbury, Richmond, and Nepean, and Inhabitants in general, that they continue to carry on the Brewing Business on the same Terms as heretofore; and as it may be an accommodation to many of the former to be occasionally supplied with Proportions of from Five to Twenty Gallons from time to time, on Credit till January next, K. and W. undertake to furnish such Quantities upon their Notes of Hand payable at that period. Any Commands will be punctually attended to.³⁸⁶

³⁸¹SG, 10 October 1812; repeated 17, 24 and 31 October and 7 November.

³⁸²SG, 5 February 1814.

³⁸³SG, 23 December 1815; 13 January 1816.

³⁸⁴SG, 16 March 1816.

³⁸⁵John Howe to Commissioner Bigge, 15 December 1820, ML, BT 2, p. 728. The equipment did finally sell for only £60-70 (pp. 725, 727).

³⁸⁶SG, repeated 12 October.

Howe thought the beer of good quality and that it was reasonably priced at £9 a hogshead.³⁸⁷ Nevertheless, the brewery only lasted a year, or two, at most. Kable returned to his Sydney home in 1813.³⁸⁸ Woodbury remained in the house next to the brewery, both of which he put up for sale in 1816. The brewery was described as extensive, with a large granary and outhouses, all in brick, and with all utensils. While no doubt hoping the brewery was an attractive proposition, he also pointed out that the building was suited to 'Trade in general, being well situate opposite the new Market Place at Windsor'. The brewery was for private sale, and, if not disposed of, would go to auction on 6 March.³⁸⁹ Nothing came of either approach and the property was relisted for private sale and auction on 23 March, without a reserve price.³⁹⁰

Windsor was without a brewery for two or three years, until John Jones took up a brewing licence in 1815, which he renewed for the next three years. Floods in 1819 prevented licence applications from Windsor being received on time in February.³⁹¹ It is possible that Jones did renew in 1819. Whatever, his place was taken by George Kable, who petitioned for a licence on 9 February 1820, 'having recently erected at a considerable expence a Brewery in the Town of Windsor and as there is [no] such establishment of the kind in the said Town, since his Father in Law, Mr John Jones, has declined the business'.³⁹² Kable had a licence in 1820 and 1821.³⁹³

So Windsor was served by four different commercial breweries for the years 1806-10, 1811-12, 1815-18 (or 19) and 1820-1. Thompson's exit from the

³⁸⁷John Howe to Commissioner Bigge, 15 December 1820, ML, BT 2, p. 728.

³⁸⁸SG, 27 February 1813.

³⁸⁹SG, 17 February 1816; repeated 24 February and 2 March 1816.

³⁹⁰SG, 16 March 1816.

³⁹¹Campbell to Wylde, 15 February 1819, AONSW, Col. Sec. 4/3499, p. 316. Only one brewer – Lawrence – is in the list of applicants approved by the Governor on pp. 318-20.

³⁹²Wentworth Family Papers, ML, A764, p. 101 (CY 727, p. 265).

³⁹³Wentworth Family Papers, ML, A765, pp. 61-5 (CY 727, pp. 417-20); SG, 19 February 1820, 24 February 1821.

industry was wholly natural. The exit in turn of Henry Kable and Woodbury, Jones, and George Kable is less easily explained. In the 1810 census, 2,389 souls were counted in Hawkesbury, 1,807 in Parramatta, 6,156 in Sydney, and 100 in Newcastle.³⁹⁴ Hawkesbury had overtaken the Parramatta district in population in 1805 and remained the larger of the two into the 1820s.³⁹⁵ The brewing industry was focused on the largest market of Sydney. That is where most brewers were located; Squire's and, for a few years, Blaxland's, were halfway along the Parramatta River between Sydney and Parramatta, at Ryde, itself a reasonable concentration of people which was included in the Sydney census district. The Parramatta market was easily served by brewers in both locations.

Windsor on the other hand was a long way from Sydney, and linked by lengthy road or water journeys. A brewer may have hoped that the transport costs would provide some measure of natural protection against competitors. This was probably so during Thompson's time. Rushton's accounts for the government brewery at Parramatta in 1806 show large increases in sales in Sydney, Parramatta, and the smaller settlements within a 10 kilometre radius around Parramatta, such as Castle Hill. But sales to towns in the Hawkesbury were small.³⁹⁶ This may have changed in the early 1810s. Kable and Woodbury had tried to sell in the Sydney market but appear not to have succeeded in this endeavour. That they made the attempt shows that they felt capable of supplying Sydney buyers and competing against the Sydney brewers, who in turn might have been thinking the same thing about Hawkesbury.

Part of the problem for the Windsor brewers may have been that the Hawkesbury population was rather more dispersed and rural, making home

³⁹⁴General Statement of the Inhabitants in His Majesty's settlement on the Eastern Coast of New South Wales, 1 March 1810, HRA VII, p. 281. These are figures for mustering centres and not for the townships themselves, but they are useful for giving the size of the local market.

³⁹⁵K. W. Robinson, 'Land', in G. J. Abbott and N. B. Nairn (eds), *Economic Growth of Australia 1788-1821*, Melbourne University Press, 1969, p. 86. The point is somewhat modified by the settling of Liverpool, about 14 kilometres south-south-east of Parramatta, which by late 1819 had 3,620 inhabitants (HRA X, p. 286). Liverpool was an extension of the Parramatta market and more easily reached by the Sydney and Ryde brewers, than by a brewer at Windsor.

³⁹⁶AONSW, Col. Sec. 4/1719, pp. 210-16.

delivery of beer more difficult, increasing the capacity for both illicit distilling and home brewing among the population, and reducing the number of consumers in licensed premises in Windsor. Certainly, the number of licensed premises in Windsor was low. Of the 89 full licences whose location can be identified in 1815, there were 5 in Windsor, 12 in Parramatta, 1 on the road between Parramatta and Sydney, and 71 in Sydney. The figures for beer only licences were 2 in Windsor, 1 in Parramatta, 1 on the Parramatta Road and 14 in Sydney.³⁹⁷

Whatever the reasons for the series of exits and entries in Windsor, the breweries established there were not small operations which opened and closed because of surpluses and shortages of inputs, or with the availability of imported beer. Windsor's record as the most volatile part of the industry does not support the view of brewing as an intermittent, residual activity. Rather, it emphasises a point discussed at length in Chapter 5 that the major brewers naturally concentrated in the centre of population in Sydney-Ryde, where they achieved economies of scale and other benefits of location which allowed them to dominate markets outside their immediate area, such as Parramatta, Liverpool and even Windsor. The successful and stable heart of the industry in the age of Macquarie was in Sydney and Ryde. Of the five brewers from there taking out licences in 1811, three were in business in 1821. Of the two brewers who took out licences during the 1810s, one was in business in 1821. By contrast, four brewers were in operation in succession in Windsor from 1810 to 1821.

Norfolk Island and Tasmania

The history of brewing to 1821 is largely confined to the mainland settlements. After William Thompson's departure from Norfolk Island, brewing continued to be carried on there, but in a very small way. William Redfern wrote to D'Arcy Wentworth on 11 September 1807: 'In one of my former letters I solicited to send

³⁹⁷SG, 1 and 8 April 1815.

me some Hops, which I suppose must have escaped your recollection as you took no notice of it, I shall however beg leave to remind you of it'.³⁹⁸ It would not be long before brewing ceased altogether. The official policy of depopulating the island had begun in 1805 and Norfolk was finally abandoned in 1813. It was revived as a penal settlement in 1825, when a party of about 100 people landed, but this is outside the period under consideration here and did not involve a revival of brewing.³⁹⁹

Brewing was conducted on a very small scale in Tasmania at first, but its prospects were far brighter. A small party of about 100 soldiers and convicts had been despatched to Risdon Cove on the Derwent River in 1803. In February 1804, Lieutenant-Governor David Collins arrived at the Derwent, having decided against establishing a settlement at Port Phillip in modern Victoria. The site at Risdon Cove was abandoned and a new settlement established across the river, where Hobart now stands. In November 1804, William Paterson arrived at Port Dalrymple in the north of the island. His position as Administrator gave him jurisdiction over that part of the island north of the forty second parallel. The white population of the whole island by the end of 1804 was about 600, with more than 400 of these at Hobart and fewer than 200 at Port Dalrymple. The population had grown to about 1,500 by 1810, of which 1,000 were in Hobart.⁴⁰⁰

The first years in Hobart were difficult. Collins's concern to raise the settlement above its condition of near-starvation meant that he 'had no immediate occasion' for the brewer, Thomas Rushton, and he had happily despatched him to King in Sydney in 1804.⁴⁰¹ In 1806, the scarcity of grain led Collins to issue a general order reducing the ration of maize to be distributed. He also announced that those entitled to an allowance of wheat would receive barley instead,

³⁹⁸D'Arcy Wentworth Correspondence, ML, A751, p. 202.

³⁹⁹In recent years, commercial brewing has returned to Norfolk with the establishment of a micro-brewery.

⁴⁰⁰Frederick Watson, Introduction, HRA ser. III, vol. I, pp. vii-xxxiii.

⁴⁰¹King to Sullivan, 1 April 1804, HRA IV, p. 607.

prohibiting 'in the strictest manner all Persons whatever in the Settlement from applying it to the purpose of Brewing'. Settlers would be fined £20 for a first offence, and sent from the settlement for a second. Convicts would be subject to an unspecified punishment.⁴⁰² A second order two days later made it clear that the prohibition applied to wheat and any other grain, and promised the £20 penalty to anyone whose information led to a successful prosecution.⁴⁰³

Collins's prohibition suggests that brewing was going on. In 1828, Richard Clarke claimed to have been the colony's first brewer and hop grower, but did not specify when and where he performed these feats. Clarke had gone to Risdon Cove in 1803 as a settler and superintendent, moved to Hobart upon the arrival of Collins, and in 1806 was granted 100 acres of land at Clarence Plains.⁴⁰⁴ Meanwhile, in the north, William Paterson was growing hops and, very likely, brewing beer as well. A keen botanist, Paterson had brought hop plants from his garden in Sydney.⁴⁰⁵ (Back in Sydney, Paterson's garden, including hop plants and peach trees, was thriving.)⁴⁰⁶

After 1806, grain production increased. Barley acreage around Hobart increased, with the occasional set-back, from 28.5 acres in 1806, to 56 acres in 1809, and 161.5 acres in 1813.⁴⁰⁷ At Port Dalrymple, no wheat, maize or barley had been sown by 1807, but this changed quickly in the next few years.⁴⁰⁸ The fertility of the soil and mildness of the climate were responsible for the success of barley.⁴⁰⁹ Brewing, however, was slow to develop, although some already saw Tasmania's potential. In 1813, Macquarie supported a request by Joseph Morris to settle and establish a brewery at Hobart. Morris commanded the *Atalanta*, a South Sea whaler, and had made several voyages to New South Wales, allowing

⁴⁰²General Order, 27 May 1806, HRA ser. III, vol. I, p. 541.

⁴⁰³General Order, 29 May 1806, HRA ser. III, vol. I, p. 542.

⁴⁰⁴Pearce, *Hop Industry*, p. 24.

⁴⁰⁵Paterson to King, 26 November 1804, HRNSW V, p. 487.

⁴⁰⁶SG, 23 December 1804.

⁴⁰⁷HRA ser. III, vol. I, pp. 382, 422, 500; HRA VIII, p. 189.

⁴⁰⁸HRA ser. III, vol. I, p. 748.

⁴⁰⁹John Oxley's Account of the Settlement at Port Dalrymple, 1810, HRA ser. III, vol. I, p. 762.

Macquarie to form a good opinion of his 'Industry and Propriety of Conduct'. He was possessed of considerable capital and had been 'Bred to the Brewing Trade'. Morris envisaged establishing on a large scale. He proposed 'to bring out with him three or four Brewers, as many Masters, two Coopers, a House Carpenter, a Mill-wright, and a Blacksmith'.⁴¹⁰ However, nothing came of his plan.

In 1816, *The Hobart Town Gazette* took up the cause of brewing, commenting on how the mildness of the climate allowed brewing to be carried on for most of the year.⁴¹¹ This was followed by four articles by 'Pro Bono Publico' on hop growing.⁴¹² Experimentation in hop growing was starting to bear fruit. Hop plants were being grown in Hobart in 1816, and the first crop was gathered in 1818.⁴¹³ In late 1819, Anthony Fenn Kemp confirmed that the 'hop thrives very well', adding that 'water abounds; [and] there is also very fine skinless Barley'. A brewery, however, had yet to be established in Tasmania, although his comment that no individual had sufficient capital for this task, for which a joint stock company might be required, suggests that he was talking of brewing on a large scale.⁴¹⁴ Shortly after, George Gatehouse reported that James Austin, a settler and the ferryman at Roseneath, had brewed and sold beer in small quantities.⁴¹⁵

While these developments were occurring, Tasmania's population had grown quickly, from 2,035 in 1816 to 5,519 in 1820, by which time three substantial brewers can be identified. Gatehouse had directed his attention to brewing on a scale comparable to larger brewers in New South Wales. He had laid in three tons of English hops and expected to begin malting from wheat in June 1820. While brewing from wheat and imported hops, he had no doubt he would be able to procure barley in future, and he had already contracted with

⁴¹⁰Macquarie to Bathurst, 27 August 1813, HRA VIII, pp. 80-1. A copy of Morris's memorial is not available.

⁴¹¹*Hobart Town Gazette and Southern Reporter*, 11 May, 1816.

⁴¹²*Hobart Town Gazette and Southern Reporter*, 22 and 29 June, 13 and 20 July 1816.

⁴¹³Correspondence dated 26 December 1818, Calder Papers, ML, 605, p. 684 (CY 821).

⁴¹⁴Examination of A. F. Kemp by J. T. Bigge, 8 November 1819, HRA ser. III, vol. III, p. 222.

⁴¹⁵Examination of G. Gatehouse by J. T. Bigge, 29 March 1820, HRA ser. III, vol. III, p. 351.

local hop growers to begin supplying him in 1822. With a considerable demand for English porter at £10-12 a hogshead, he was confident of success with his cheaper beer.⁴¹⁶ There was some delay in the commencement of Gatehouse's brewery, but in December it was nearly completed as was Loane's brewery. Meanwhile, Cawthorne's brewery at New Norfolk, thirty-three kilometres west-north-west of Hobart, had 'for some time past been Brewing a fine description of Table Beer from Malt made of Wheat for which there is a great demand'.⁴¹⁷ Like Gatehouse, Cawthorne preferred to use wheat even though barley was available. As in New South Wales, there may have been difficulties in malting the colonial barley which made brewers prefer wheat or maize (see Chapter six). But as in New South Wales, brewing in Tasmania was not prevented from developing by the unsuitability of local barley or the unavailability of local hops. The rapid increase in population was the main factor in the development of breweries of some size around 1820.

Brewing in Tasmania was poised for considerable expansion in the 1820s, as New South Wales had been poised about fifteen years before. Indeed, it was widely regarded as having a brighter future than the longer established industry in New South Wales. Better soil and a milder climate gave Tasmania an advantage over New South Wales in the production of hops. Bigge was certain that this would prove to be the case with barley as well, once 'a better system of agriculture' was introduced to the island. The advantages of a cooler climate were also important in malting and brewing.⁴¹⁸ Kemp was equally confident about the future of brewing in Tasmania. He felt it 'perfectly practicable' to supply the Indian market with beer and thought that this would be carried into effect in two to three years.⁴¹⁹ Brewing would expand in the 1820s and begin to reach its full

⁴¹⁶Gatehouse to Bigge, HRA ser. III, vol. III, p. 351.

⁴¹⁷George Hull to J. T. Bigge, 7 December 1820, HRA ser. III, vol. III, p. 694.

⁴¹⁸J. T. Bigge, *Report of the Commissioner of Inquiry on the State of Agriculture and Trade in the Colony of New South Wales* [House of Commons, 13 March 1823, p. 33] Australiana Facsimile Editions, No. 70, Library Board of South Australia, Adelaide, 1966.

⁴¹⁹Examination of A. F. Kemp by J. T. Bigge (continued), 12 November 1819, HRA ser. III, vol.

potential in 1832 with the establishment of the Cascade brewery. Cascade's beer was exported to India, and in the 1860s, Marcus Clarke, the author of *For the Term of His Natural Life*, declared that the brewery 'bears the palm amongst its colonial rivals without pretence of dispute'.⁴²⁰ The brewing industry however remained concentrated in the major cities of Sydney and, by then, Melbourne. All of these developments take place well after 1821 and need not concern us further.

An Industry Established

In 1821 there were six full year brewing licences issued: to Squire, Rushton, Lawrence, Byrne, George Kable and Daniel Cooper.⁴²¹ A six month licence was held by Ann Curtis in the second half of 1821.⁴²² And it appears that Thomas Middleton began operating his substantial brewery in the last quarter of the year, even though he is not recorded as having received a licence. Middleton's petition on 12 February 1822 for a licence for his New Brewery in Pitt Street clearly seeks a renewal, and other sources verify that he was already in business.⁴²³ An advertisement for the brewery in the *Gazette* of 25 January 1822 offers beer and yeast for sale, and requests the payment of debts, and the Police Fund accounts for 30 September to 30 November 1821 show Middleton, along with Lawrence and Rushton, supplying yeast to the Prisoners' Barracks.⁴²⁴ Yeast was an important and widely sold by-product of the brewing process.

III, p. 222.

⁴²⁰Quoted in Mike Bingham, *Cascade: A Taste of History*, The Cascade Brewing Company Ltd, Hobart, 1993, p. 114.

⁴²¹A list of persons who have obtained Spirits Beer and Brewing Licences in Sydney, Parramatta and for the Current Year, Sydney February 1821, in Wentworth Family Papers, ML, A765, pp. 61-5 (CY 727, pp. 417-20). Cooper's licence was variously identified as Coopers & Co., Cooper and Hutcheson, and Hutchinson & Co.

⁴²²SG, 24 November 1821.

⁴²³Wentworth Family Papers, ML, A765, p. 119 (CY 727, p. 478).

⁴²⁴SG, 18 January 1822. Sales by Middleton are also recorded for August and September 1821 as well as the first three quarters of 1822 in AONSW, Col. Sec. 4/424, pp. 81, 125, 141-2, 150.

The careers of the newcomers, Middleton and Cooper, are taken up in Chapter 7 in the discussion of the industry in the 1820s. Ann Curtis's venture in brewing, on the other hand, was short, unfortunate and unique. She was the only woman to have held a brewing licence since they were introduced, and the first woman mentioned as brewing beer for sale since the Scotch priestess who hailed Hunter back in 1798. Ann Curtis's husband had been, among other things, the small brewer who supplied the Blaxland brothers with beer in 1807. Upon his death in 1821, she left Toongabbie for Parramatta and commenced brewing there, as well as retailing wine, spirits and beer. She held both spirits and brewing licences. Failing eyesight was only one of the widow's problems, leading her to request an extension of time to pay her licence fee on 5 March 1823. Bad turned to worse, as, 'thro' the neglect of a Servant her Brewhouse caught fire, which consumed the Brewhouse Utensils, Hops, Grain, Sugar and Cooper's Tools, together with part of the main Building'. With five children to support, she appealed to the public for relief, raising £17, and then to Governor Brisbane, seeking a living promised by Governor Macquarie to her late husband.⁴²⁵

Curtis's pub brewery was an oddity; Kable's Windsor brewery would be short lived, like its predecessors; and the intermittent record of Byrne's brewery was coming to an end. But these were uncharacteristic and minor players in an industry dominated by large and successful brewers. Squire, Rushton and Lawrence had an average of 21 years in the business. Squire produced about 100,000 gallons in 1820. Like Squire, Lawrence had expanded his business considerably in the last years of the 1810s, while Rushton had recovered from his cessation in 1819. They had been joined by Cooper and Middleton, who had the financial resources to start at a reasonable size of operation. While Cooper may

⁴²⁵To the Humane and Benevolent Inhabitants of the Colony of New South Wales. The Humble Petition of Ann Curtis, 22 March 1823; Ann Curtis to Governor Brisbane, 18 June 1823, AONSW, Col. Sec. 4/1771, pp. 339-340c. There is no record of Curtis renewing her brewing licence in 1822. She is not one of the nine licensees in 1822, see Table 4.1. But she was supplying small quantities of yeast to the government in 1822 and 1823 along with other brewers (AONSW, Col. Sec. 4/424, pp. 142, 176, 214, 320). There are questions about her career which cannot be answered here.

have had a false start with his brewery in 1821, which appears not to have begun full production until 1824 (see Chapter 7), he was, with William Hutchinson, Samuel Terry and three others, an owner of the Lachlan & Waterloo Flour Mills, one of the largest businesses in the colony.⁴²⁶ Middleton's rapid rise as a brewer was shown in 1822 when he was the other signatory, with the big three of Squire, Rushton and Lawrence, of the petition in which they identified themselves as having a number of beer-only licenced premises to which they supplied their beer.

Just how large the industry had become is indicated by the record of hop imports (discussed in Chapter 6). In 1820 and 1821, these were enough to produce 312,704 gallons, at a hopping rate of an ounce a gallon. Local production perhaps increased this by 99,200. This would allow for average beer consumption of 14 gallons per head in New South Wales in 1821. This is a very broad estimate. Hopping rates may have been higher, brewers almost certainly would have held over some hop stocks from these years, and the estimate of local hop production may be too high. Further, some part of production was consumed by visiting sailors, taken on board ship or sold to Tasmania. A reasonable and rounded estimate of production is 360,000 gallons in 1821. This fits with Squire's production figure of nearly 100,000 gallons in 1820 and suggests that the other two of the big three must have produced somewhere near his level. At an average retail price of 2s per gallon, the total value of local beer production was about £36,000 or 24s per head. Gross domestic product for New South Wales in 1821 has been estimated at £698,300, or about £24 per head.⁴²⁷ Assuming that 30,000 gallons of local production was consumed by sailors and Tasmanians, local beer

⁴²⁶SG, 14 April 1821; Notice of the Lachlan & Waterloo Water Mills, AONSW, Col. Sec. 4/1751, pp. 237-40.

⁴²⁷Estimates by N. G. Butlin and W. A. Sinclair, in Vamplew, *Historical Statistics*, p. 128. If other activities have been as undervalued as brewing, this figure would seem in need of reassessment. The point would still remain that brewing was a significant contributor to GDP. As a technical note, the beer industry's contribution to GDP is the value added by the various stages of production leading to final consumption (broadly, the growing of inputs, malting and brewing, and distributing and retailing) minus any imports of intermediate goods such as English hops. The retail price assumes equal quantities of strong and table beer wholesaled at 2s and 1s respectively with a retail markup of a third. For further discussion of retail mark-ups, see Chapter 6.

consumption was 11 gallons per head, which dwarfed beer imports in 1820-21 of a gallon per head per year, although imports doubled in 1822 (see Table 1.1).

With local beer production contributing about five per cent of gross domestic product and providing about nine tenths of total beer consumed, it is impossible to think of brewing as a small scale and intermittent activity taken up in times of grain surpluses or to fill shortages in the supply of imported porter. The histories of individual brewers, and the scale of their operations by 1820, confirm this point. The major breweries were not started up quickly in response to temporary market conditions, but were long term and well-developed operations conducted on a relatively large scale in response to a permanent demand for reasonably priced beer. The big three of Squire, Rushton and Lawrence had built their breweries up over many years. Kinsela and Blaxland, while failures, had vigorously pursued large, considered investment decisions over several years. Cooper and Middleton entered the industry in 1821 with the same ambition and commitment.

The idea that local brewers entered and exited the market quickly in response to the availability of imported beer not only misrepresents the nature of the local brewing industry but also the nature of the international trade in beer. Implicit in this view is that imported beer was consumed very quickly after arrival, leaving the market dry until the next shipment. But the flow of imported beer to the consumer was quite steady. Strong beer such as porter stores, and advertisements of the time show cargoes of porter and ale being sold many months after landing. Quite stable prices for imported beer reinforce this point, in contrast to Dingle's claim that colonial brewers had to contend with fluctuations in the price of imported beer.⁴²⁸ Local brewers were in permanent competition with imports for the premium end of the market, just as they were in permanent competition with each other for the much larger market for lower priced, lower quality beer.

⁴²⁸Dingle, 'Magnificent thirst', p. 235.

Equally, the notion that brewers produced intermittently, subject to the availability of grain, misrepresents the nature of demand as much as it does the nature of supply. Beer was a basic item of regular consumption in the English diet, not a residual and occasional luxury item. The brewers constituted part of the permanent demand for grain, as surely as the bakers. Brewing did not cease when 'normal' levels of grain production only allowed for the basic activity of bread production, for the simple reason that brewing was as basic an activity as baking. For most of the period examined here, the supply of grain was sufficient for both, although the type and suitability of available grain meant that brewers made compromises on the style and quality of beer produced. Even after major droughts or floods, brewers were able to operate and indeed prosper, as the government brewery did when it was leased to Rushton immediately after the great Hawkesbury flood. Especially in earlier years, it is possible that some small, marginal brewers were encouraged to enter the market by large surpluses of grain and a consequent fall in grain prices, as Mathias reports happening in contemporary Britain.⁴²⁹ But from 1811, when brewing licensing begins, there is not one identifiable commercial brewer who operated only during periods of grain surpluses. This is not to say that brewers were unresponsive to fluctuating grain prices during the year. It seems that some brewers chose to produce most of their beer during winter, when lower temperatures reduced the chances of spoilage, while others increased production in spring and summer, when the consumption of beer increased. At some times of the year, therefore, brewers had excess capacity and might take advantage of lower prices to brew some additional batches. But this is quite a different matter to saying that breweries sprang up with surpluses and then disappeared.

Finally, the licensing record and the histories of individual brewers also run counter to Walsh's view that 'Government regulation of the industry led to interference and a consequent decline in brewing in the years 1815-20'. He argues

⁴²⁹Mathias, *Brewing Industry*, p. 22.

that 'In 1815 six brewing licences were taken out, but this number was halved when the government made it obligatory for a brewer to take out both a beer and spirits licence together'. Local brewers 'were forced to pay £55 in licence fees', made up of the £25 brewing licence and the £30 spirits licence. 'In 1817 and 1818 there were only three licensed brewers in the whole colony.'⁴³⁰ Following Walsh, Hainsworth states that 'During the Macquarie period the industry was frequently in difficulties, exacerbated by Macquarie's imposing a £55 licence fee, and it declined markedly in the period 1816-20'.⁴³¹

Walsh's view is based on a government order of 27 January 1816, a letter from Gregory Blaxland to Macquarie, and the announcements of licences published in the *Gazette*. The order required those who retailed spirits to take out a licence for spirits, wine and beer, and to furnish beer if requested by a customer. The spirits licence had always allowed the licensee to sell wine and beer. This was now spelt out, and the supplying of beer was made obligatory. The order did not require brewers to hold a spirits licence. Blaxland's letter to Macquarie makes this clear.⁴³² He uses the occasion to make the by then conventional brewer's complaint about the brewing licence of £25, but his purpose in writing was to object to the order, not because it forced him to hold a spirits licence, but because it did away with the £5 beer shop licences, through which most of his beer was retailed. In the end, Macquarie reinstated the beer only licence. Blaxland's subsequent withdrawal from the industry was due to fundamental commercial problems, not to licensing changes.

Finally, Walsh's licence figures are wrong. The actual numbers for full time licences were 5 in 1815 and 1816, and 4 in 1817 and 1818. Numbers dipped to three in 1819 when Rushton ceased brewing due to the failure of his hop crop. The increase in the number of full year licences to six in 1821 which Walsh

⁴³⁰Walsh, *History of Manufacturing*, ANU, p. 27.

⁴³¹*Sydney Traders*, p. 189.

⁴³²11 May 1816, AONSW, Col. Sec. 4/1735, pp. 63-6 (6045: 799-802). A second letter, dated 23 May 1816, written in a different hand, and containing much the same argument, is on pp. 67-71 (803-7).

identifies, was not due to the licensing situation being 'remedied', but to Rushton having returned to production in 1820, Byrne making one of his periodic re-entries, and the entry for the first time of Cooper. Far from declining in the second half of the 1810s, the brewing industry expanded rapidly as the economy came out of its commercial crisis and, more importantly, as the population of New South Wales grew from 13,000 in 1815 to 28,000 in 1820.

More broadly, government interference and assistance are relatively unimportant in the development of the industry. There is a longish list of claims about political interference. Thomas Palmer's complaints about the interference of the officers in the affairs of Boston & Co. appear to have been overstated and brewing does not figure as a part of his complaints. Hibble says that government limited Squire's

output to a certain quantity per week, the object probably being to prevent undue competition with the liquor trade carried on by the officers under the Government of the day. It was not till later that the restriction was removed, and Mr Squire then carried on an extensive business.⁴³³

But there is no source for the claim, which seems at odds with what we know of the development of Squire's business and of brewing in general. Huntington and Webster assert that the rebels closed down Rushton, and Walsh concludes that the interregnum was an inauspicious time for the brewing industry. These claims are not supported by the evidence, which shows the industry blossoming in the two years following Bligh deposition. The introduction of brewing licences in 1811 did not retard the industry although it probably did affect its structure (see Chapter 5). Only one brewer identified as operating in early 1811 did not take up a licence. This was Thomas Evestaff, and it is most likely that a range of factors influenced his decision to leave the industry and the colony.

⁴³³Hibble, 'Ryde', p. 288.

The exercise of discretionary powers in issuing brewing licences appears to have been little used in the Macquarie period, although when it was used it could cause considerable anxiety to the brewer. Lawrence applied for a brewing licence on 9 February 1820, but for some reason was not one of the four recipients of brewing licences announced on 19 February. He wrote a lengthy memorial to the Judge Advocate, John Wylde, on 23 February, in which he raised his longstanding commitment to the brewing business, his plans for expansion, and his confusion at the decision, as he 'had always understood it be an object with this Government to favour the consumption of Malt Liquor in preference to Spirits'. Lawrence's tension is obvious as he entreats Wylde 'to take into consideration the ruinous consequences of a suspension of his licence in a business requiring no inconsiderable capital'. He put forward D'Arcy Wentworth as a referee.⁴³⁴ Why the licence was not granted in the first instance is unknown, but Lawrence was successful in his second application. It is a reminder of the scope for caprice in an autocratic government, but Lawrence's problem was not common. The other area of policy which had a direct effect on brewers was retail licensing. Blaxland's concern about the cessation of retail beer licences has been discussed already and is returned to in Chapter 5. In all, while government decisions sometimes caused distress to businessmen, as they sometimes do today, it does not seem that the industry was significantly impeded by government policy, for which the best evidence is surely the considerable development of brewing up to 1821 and its size and success at that date.

Equally, there seems limited evidence for favouritism towards particular brewers. Squire may have enjoyed the patronage of Paterson and Grose, although not too much can be read into that. King's leasing of the government brewery and his sale of the second set of brewing equipment appear to have been quite above board as far as the price and conditions went, although some element of favouritism may have occurred in the selection of Rushton and Thompson.

⁴³⁴Wentworth Family Papers, ML, A764, pp. 113, 149-50 (CY 727, pp. 277, 315-6).

Governor Bligh insinuates that Squire was favoured in his lease of the government brewery, but this is unsupported by the available evidence. Macquarie intervened on Squire's behalf late in the 1810s to arrange for the importation of a consignment of hops, free of freight charges, but he was dissuaded from doing this again by the British authorities.⁴³⁵ Again, the conclusion appears to be that the government was not a significant factor in the success of the industry. This success was the result of a strong demand for beer and the ability of individual brewers to meet that demand under the difficult circumstances in the colony. There were two fundamental aspects to the brewers' response: the development of a remarkably modern business structure and of a distinctive if controversial brewing practice. These are discussed in chapters 5 and 6.

⁴³⁵Macquarie to Bathurst, 22 March 1819, and Squire to Macquarie, 15 February 1819, HRA X, pp. 82-3; Goulburn to Macquarie, 24 March 1820, HRA X, p. 296.

Table 4.1: Brewing Licences Issued in New South Wales, 1811-1831

Year	AL	PF	Other	Summary
1811	4	6	4	6
1812		4+1		4+1
1813		3	4	3?
1814		4		4
1815	5	5+2		5+2
1816	4	5	4	5
1817	3	4	4	4
1818	4	4+1	3	4+1
1819		3	4	3
1820	4	5	4	5
1821	6	6+1	6+2	6+2
1822		8	8+1	8+1
1823		10		10
1824		8+2e	8+2	8+2
1826			13	13
1828			9	9
1829			6	6
1831			7	7

Note

Licences taken out later in the year for three or six months, as opposed to yearly licences recorded in a later quarter, are shown after the plus sign.

Sources

AL Announcements of licences issued, with names of licensees, published in the *Gazette* on 16 March 1811; 8 April 1815; 6 April 1816; 19 April 1817; 4, 11 and 18 July 1818; 19 February 1820; 24 February 1821. Walsh, *History of Manufacturing*, ANU, p. 27, uses this information to arrive at brewing numbers. There are two errors in his use of this source. First, he puts the figure for 1815 as six when it should be five; he appears to misread a beer licence as a brewing licence. Second, for 1818, he has 3 licences, using the first notice of 4 July rather than the notice of 18 July, which gives four. A larger problem, however, is that the announcement of licences in the *Gazette* does not include late payers for annual licences or licences issued for 3 or 6 months. AL is valuable because it gives the names of licensees but PF is to be preferred for determining the number of licences issued.

PF Police Fund accounts published in the *Gazette*, 20 April, 20 July and 26 October 1811; 1 February, 18 April, 25 July and 24 October 1812; 30 January, 24 April, 31 July and 23 October 1813; 5 February, 30 April, 6 August and 12 November 1814; 28 January, 22 April, 5 August and 14 November 1815; 10 February, 6 April, 11 May, 10 August and 2 November 1816; 8 February, 3 May, 16 August and 22 November 1817; 14 February, 6 June, 15 August and 28 November 1818; 20 February, 12 June and 28 August, 1819; 8 January, 18 March, 29 July and 11 November 1820; 17 February, 23 June, 8 September and 24 November 1821; 18 January and 19 April 1822. The Police Fund and the Orphan Fund were established by Macquarie in 1810 to receive the various customs, duties, fines, fees, quit rents and licences imposed by the colonial administration. These two funds replaced 'what was termed the *Female Orphan School* and *Gaol Fund*' (Macquarie to Viscount Castlereagh, 30 April 1810, HRA VII, p. 254). The establishment of the funds was approved by the Earl of Liverpool on 5 May 1812, HRA VII, p. 481. The two accounts were reported together in the *Gazette*; the Police Fund contained the revenue from spirits, beer

and brewing licences. A separate statement of the same figures for 1814-20 is available in Police Reports and Accounts 1810-1827, D'Arcy Wentworth Papers, ML, D1 (CY 417). Wentworth was Treasurer of the Police Fund, except briefly in 1820-21 when William Minchin had the duty. His papers cover licences issued from the fourth quarter 1810 to fourth quarter 1821. It is very incomplete for 1810-13, complete for 1814-19, and incomplete for 1820-1. Naturally enough, the numbers accord with those in PF. In 1822, the two funds were replaced by the Colonial Fund. The quarterly accounts for this fund for 1822 and 1823 are in SG, 30 January, 20 February, 6 March, 17 July, 18 December, 23 December 1823; 8 January 1824; 24 February 1825. The accounts for the second to fourth quarters 1822 do not report any licence revenue and miss the three month brewing licence issued to M. Bacon. For 1824, the annual report has only the value of brewing licences issued in Spanish dollars: \$900 at \$1 = 5s, i.e. £225 (see SG, 3 October 1825). This accords with 8 full year licences at £25 each and 2 six month licences at £12 10s each, as reported in Wentworth Family Papers. From the 1825 annual account onwards, brewing licences are not reported at all, see SG, 8 October 1827; 1 February and 17 March 1828; 1 September 1829.

Other

1811: Declaration of Magistrates, 11 March 1820, BT 21, pp. 4031-2 (called DM below). This has an incomplete table of spirits, beer and brewing licences for 1809-20.

1813: SG, 6 and 20 March 1813, 15 May 1813. These identify Rushton, Lawrence and Kinsela as brewers, and report on Squire's success with hop growing. As explained in the text, it seems unlikely that Squire gave up brewing in 1813, when he was brewing for long periods on either side of that year and when his hop plants were finally bearing commercially useful quantities of hops. As with 1821, the PF accounts may have missed some licensees. The list of spirits licensees in SG, 7 August 1813 has 86 names, and yet the PF accounts for the first three quarters have 75 spirits licences, £85 worth of licences, and no licences. It is

arithmetically possible that in the second quarter six half yearly licences at £10 each and five three-month licences at £5 each were issued, giving 86 licences, although the issuing of three month licences at this time of the year seems unlikely.

1816: DM.

1817: W. C. Wentworth, *New South Wales*, p. 114. DM has 3.

1818: DM has 3.

1819: D'Arcy Wentworth's evidence before the Bigge Inquiry on 19 November.

1819 (Ritchie, *Oral Evidence*, p. 53). The number in the PF accounts kept by Wentworth has been used.

1820: DM.

1821: Six brewers are identified by name in A list of persons who have obtained Spirit Beer and Brewing Licences in Sydney, Parramatta and for the Current year Sydney February 1821, Wentworth Family Papers, ML, A765, pp. 61-5 (CY 727, pp. 417-20). D'Arcy Wentworth Papers, ML, D1 has Mrs Curtis's six month licence. Middleton is identified by various sources as operating in the latter part of 1821 (see text).

1822: HRA XI, p. 211, has 8 licences at £25 each; to which is added one brewing licence for three months issued to M. Bacon (Colonial Revenue Account 1822-24, Wentworth Family Papers, ML, MSS 3726x, 4th quarter).

1824: Colonial Revenue Account 1822-24, Wentworth Family Papers, ML, MSS 3726x.

1826 Cunningham, *Two Years* [vol. II, p. 74].

1828: *The Australian*, 16 July 1828, has seven to which are added Hughes and Squire (see Chapter 7).

1829 and 1831: Blue Books, PRO, CO 206/70-1 (AJCP 1170).

Chapter 5

The Business of Brewing

Commercial brewing was thirty years old and thriving in 1821. It had been an established and successful industry prior to Macquarie's arrival in late 1809, and had developed steadily over the next twelve years under the guidance of the leading brewers of the day: Squire, Rushton and Lawrence. Colonial beer far outsold imported beer and was a significant item in household expenditure. During this progress, brewing in Australia had developed certain features, all of which are remarkably 'modern'. Commercial brewers dominated local production: household production was uncommon and insignificant. Commercial brewing in turn was dominated by common brewers who produced beer for wholesaling to retailers or households: brewing victuallers – who brewed on their own licensed premises for sale over the bar – contributed a small part of total output even in the earliest years of the colony, and were rare from 1811 onwards. The dominance of common brewers was associated with a range of characteristics: a well-developed distribution system which included tied houses; large scale production relative to the size of the market; geographic concentration in the major centre of population; specialisation; and vertical integration. These last two characteristics are not inconsistent. The major brewers devoted most of their energies to beer, and covered most or all of the activities in the production of beer, including growing inputs, malting, coopering, distributing and retailing, as well as brewing itself.

The industry's modernity may seem paradoxical at first. In a small, primitive and far-flung corner of empire, developments were occurring, albeit on a very small scale, which mirrored and even out-paced the major changes occurring in the industry in Britain. Clearly, the nature of early colonial society fostered these developments. Australia was a new society, without established traditional patterns of production and consumption. Brewing was from the first a

commercial activity, and home brewing never approached the importance it still had in Britain. As a new society, skills and equipment were in relatively short supply. Commercial brewing was therefore dominated by a few, relatively large, specialised brewers who sold to householders and retailers. Unable to draw on established specialists in hop production and malting, these larger brewers also involved themselves in these earlier stages in the production process. The large demand for a common item of consumption in British society, combined with the concentration of the industry in a few hands, meant that brewing was one of the first large-scale manufacturing activities in the colony. These relatively large breweries were capable of extracting significant economies of scale. While the circumstances of the colony help explain the structure of the industry, they cannot explain why an industry existed at all or was so successful. Individuals of ability and drive, most of them convicts, built and ran the breweries. It is worth recalling that the colonists had come from one of the most vibrant economies in history. This is one of the fundamental facts about early colonial Australia which always bears repeating.

Commercial and Home Brewing

The assumption that home brewing in the colony was common and significant seems at first blush to be perfectly reasonable. Much of the beer consumed in England was made at home or in institutions such as hospitals. While private brewing's share of total output had been declining from the mid-1750s, it still accounted for about half of all beer consumed in the 1820s.⁴³⁶ For Freeland it was therefore obvious that 'As with many other things, the practice was transplanted directly to Australia with the coming of free settlers. By the late 1790s many

⁴³⁶Mathias, *Brewing Industry*, p. 377. In 1740-9, commercial brewers accounted for 35.2 per cent of malt made into beer; in 1820-5, the figure was 49.4 per cent. The term 'commercial brewer' is sometimes used in Britain as a synonym for 'common brewer'. Throughout this thesis, it is used in the broad sense of any brewer making beer for sale, and includes both common brewers and brewing victuallers. For further discussion of the size of private brewing, see Table 1.3: *Sources*.

people were brewing their own ale from a variety of materials'.⁴³⁷ But it cannot be assumed that the tradition of home brewing was as readily transported to Australia as the taste for beer. In England, home production was carried on in large institutions such as university colleges and hospitals, on large estates and in gentlemen's residences, and on a multitude of small but well-equipped farms, often by housewives well versed in a range of traditional cottage crafts. Institutional brewers did not exist in the colony; it took time to establish estates, and gentlemen; and many, probably most, of the small farms were not the well-established productive households that dotted rural England. While larger households belonging to leading citizens such as Marsden or Paterson produced hops and, one expects, beer, smaller landholdings were often primitive affairs run by inexperienced emancipists. The assumption that primitive conditions threw people back on their own resources and home production, is rather less likely than that these primitive conditions, and a lack of experience, made home production impractical or even impossible. Finally, home brewing in late eighteenth century Britain was not common among the 'common people'. This was particularly so with the urban working class, from which many of the convicts came, and to which many of them belonged in the colony. Like the urban population of England, many of the people of Sydney and the smaller settlements bought their bread, beer and meat, or, often lacking facilities for cooking, took their main meal of the day at chophouses and other victuallers. Adam Smith dealt with this subject at some length in his discussion of taxes upon commodities. In 'the country, many middling and almost all rich and great families brew their own beer', in contrast to 'the common people, to whom it is every where more convenient to buy their beer, by little and little, from the brewery or the alehouse'.⁴³⁸

⁴³⁷J. M. Freeland, *The Australian Pub*, Melbourne University Press, 1966, p. 29.

⁴³⁸*An Inquiry into the Nature and Causes of the Wealth of Nations* [1776] Edited by Edwin Cannan, Methuen and Co., London, 1950, vol. II, p. 372.

New South Wales was an infant economy. Its manufactures were mainly those relatively simple goods which used available raw materials and were common items of household consumption: bread, beer, soap, salt, leather, cloth, cheap clothes and shoes. Nevertheless, Australia was, from the start, a modern, commercial economy rather than a traditional, household economy. It was a society of strangers, set down in a land without villages or farms. It was perfectly natural that whatever equipment or expertise was available would be drawn towards production on a larger scale for commercial sale, rather than restricted to smaller scale production for household use only. Brewing was an example of this tendency, even in the 1790s, when Squire and, in particular, Boston & Co., had been producing relatively large amounts of beer for sale. Boston & Co. had the great benefit of Palmer's capital, which allowed Boston's expertise to be put to good use. With a purpose built brewery, followed by a mill, and financial connexions with retailers, the future direction of brewing in the colony was already apparent.

Home brewing was not unknown. In 1808, Mann reported that 'a number of persons brew their own beer'.⁴³⁹ But it was a very rare topic in private correspondence and the reader of early colonial history does not gain an impression of widespread amateur production of beer. By contrast, the home manufacture of peach cider appears to have been more common. Whilst of some concern to the authorities because it could lead to illegal distillation of fermented peaches, making peach cider was a common and, indeed, officially sanctioned activity.⁴⁴⁰ While Pearce states that 'Undoubtedly housewives in the new colony had knowledge of how to brew beer', their interests seemed to have lain

⁴³⁹*New South Wales*, p. 43.

⁴⁴⁰Bligh offered a prize of a cow to 'the person who will produce, in the next Peach Season, Two Hogsheads of Peach Cyder, which when One Year old is judged by him to be the best' (SG, 14 December 1806). Earlier in the year, James Mayne appeared before the Bench of Magistrates for having 'upwards of four hundred gallons of peach eyder... in a state of fermentation, and then nearly fit for distillation' (SG, 11 May 1806), and an illicit still detected in June included seven casks of cider and was no doubt engaged in converting this into strong liquor (SG, 8 June 1806).

elsewhere.⁴⁴¹ A letter to the *Gazette* from 'A Housewife' gave advice to the cider maker on small and large farms.⁴⁴² Even Samuel Marsden, while devoting himself to the cultivation of the hop, found success with peach cider, of which he made 60 gallons in 1803.⁴⁴³ By the end of the 1810s, home brewing had become rarer still. While Blaxland thought that the climate favoured home brewing against large scale commercial brewing, and Archibald Bell knew of a private family which made 'excellent beer', it is clear that the commercial brewer dominated local production.⁴⁴⁴ When D'Arcy Wentworth was asked by Commissioner Bigge 'Do you think the inhabitants brew for their own use?', he replied that 'they generally purchase beer'.⁴⁴⁵ This was, he continued, despite there being 'no tax on private brewing'. Wentworth would have been closer to the truth if he had said this was because there was no great tax advantage to home brewing. In New South Wales there were no excises on malt, hops or beer, and the commercial licence fee of £25 was not a great imposition for a brewer of any size. By contrast, in Britain, the various government charges on commercial brewing were heavy, with duty rates from the early 1800s to the mid-1820s of 10s on a barrel of strong beer.⁴⁴⁶ The private brewer was exempt from excise duties. A generation before, Adam Smith had protested at the tax advantage of private brewing of nine or ten shillings per barrel, at a time when the price of a barrel was 30 shillings.⁴⁴⁷ He argued that it was inequitable that private brewing was exempt from the excise, as the duties fell 'frequently much lighter upon the rich than upon the poor'. Private brewing, he concluded, should be subject to the same duties as commercial brewing. While this had not occurred in Britain, the same result was

⁴⁴¹Pearce, *Hop Industry*, p. 13.

⁴⁴²SG, 9 November 1806.

⁴⁴³Letter dated 27 April 1803, in George Mackaness (ed.), *Some Private Correspondence of the Rev. Samuel Marsden and Family 1794-1824*, privately printed, Sydney, 1942, p. 31.

⁴⁴⁴Blaxland's Memorial to Bigge, 21 January 1821, ML, BT 25, pp. 5537-8; Bell's Evidence, undated 1820, in Ritchie, *Written Evidence*, p. 63.

⁴⁴⁵19 November 1819, Ritchie, *Oral Evidence*, p. 53.

⁴⁴⁶Mathias, *Brewing Industry*, p. 546.

⁴⁴⁷*Wealth of Nations*, vol. II, p. 372.

achieved in the colony by exempting commercial brewing from excise. Placed on a level playing field, commercial brewers fully exploited their advantages over their household rivals, chief among these being the existing and acquired skills of the brewers and their staff, the more intensive use of equipment, and economies of scale in the purchase of materials in production. Similarly, when the Beer Act of 1830 abolished the beer duty on commercial brewing, private brewing in Britain declined sharply, although it too had been declining in relative importance for some time due to commercial pressures.⁴⁴⁸

Common Brewers and Brewing Victuallers

Two types of commercial brewer operated in England. A brewing victualler was a licensed victualler who brewed his own beer for sale over the counter at his own inn or public house. In modern terminology, he was a 'pub brewer'. A common brewer wholesaled his beer to licensed victuallers, and to private customers in quantities above a minimum amount set by law, a reminder that many households once bought their beer in bulk. As late as the 1820s, brewing victuallers accounted for a third of total output by commercial brewers in England.⁴⁴⁹ A brewing victualler was subject to all of the legislation governing brewers and licensed victuallers, while the common brewer was subject only to that legislation governing brewers. The brewing victualler would therefore pay the licence fee required to operate his public house, as well as the relevant excise duties and licence fees placed upon the brewer.

The same legal arrangements were put in place in the colony over several years and amidst some confusion. Until the introduction of brewing licences in 1811, only a brewing victualler needed a licence. Some of the brewers had licensed premises for which they paid a licence fee. In 1809, Andrew Thompson

⁴⁴⁸T. R. Gourvish and R. G. Wilson, *The British Brewing Industry 1830-1980*, Cambridge University Press, 1994, p. 65.

⁴⁴⁹Mathias, *Brewing Industry*, p. 377.

had liquor licences in Hawkesbury and Sydney, and Squire had the Malting Shovel at Ryde, but none of the other known brewers had retail licences.⁴⁵⁰ While a brewing victualler who also sold spirits and wine clearly needed a retail liquor licence, there was some confusion over whether a liquor licence was required to retail beer only. Attempts to exploit a possible loophole may have prompted the Parramatta Magistrates' order in 1805 that private brewers were to desist from their 'unauthorised labours, and no beer [was] to be vended but by licence'.⁴⁵¹ This directive was probably aimed at small time brewing victuallers operating without a retail licence, rather than at common brewers operating within the law. Governor King clarified the situation in 1806 by issuing a notice that a spirits licence was necessary for the retailing of beer, although this may have been imperfectly enforced.⁴⁵² Macquarie's introduction of £5 beer only licences in 1810 put the matter beyond doubt and revealed the extent to which brewing victuallers had been operating without a licence. Lawrence, Evestaff, West and Byrne took out beer retailing licences in 1810 and were operating as brewing victuallers.⁴⁵³ Byrne may not have been brewing in 1809 but the other three certainly were. None of them had a spirits retailing licence in 1809. Rushton, on the other hand, had no retailing interests at the time and was operating within the law as a common brewer.

The brewing licence was introduced in 1811. From that date a brewing victualler was required to hold a brewing licence at £25, and either a beer retail licence at £5 or a general liquor licence at £20, which was raised to £30 in 1816. Lawrence renewed his beer retail licence in 1811, but was not in the first announcement of four brewing licensees in March. It seems that he took up one of the two full-year licences issued later on, and it is quite possible that there was some initial confusion as to whether a brewing victualler needed a brewing

⁴⁵⁰SG, 26 February, 5 March 1809.

⁴⁵¹SG, 3 March 1805.

⁴⁵²SG, 13 April 1806.

⁴⁵³Public Notice, SG, 21 July 1810.

licence, just as there had been confusion previously about whether he needed a retail licence. There was no confusion for West at the Blue Lion Inn. He took out one of the new brewing licences and upgraded from a beer licence to a spirits licence. While a spirits licence was only identified as for the selling of spirits and wine, it also included the sale of beer. The other four brewers operating in 1811 – Squire, Rushton, Kable and Kinsela – did not have retail licences, although in Squire’s case, this does not mean his famous tavern at Ryde was not open for business. Despite having been resident constable at Kissing Point since 1805,⁴⁵⁴ Squire was an enemy of bureaucratic good order and well-known for his tardiness or even reluctance in applying for licences. Squire’s defence may have been that, like common brewers in Britain, he did not need a retail licence in order to sell his beer from the brewery tap-house.⁴⁵⁵ But Squire also sold spirits from his tavern. His ‘notorious’ flouting of the law finally forced Macquarie to order that Squire not be granted a brewing licence unless he took out a spirits licence as well.⁴⁵⁶ While operating his tavern for most of the 1810s, Squire was brewing on a scale that required sales through other outlets, and he cannot be thought of as a brewing victualler.

In each year from 1811, there were more common brewers than brewing victuallers, and, as common brewers produced on a larger scale, they provided most of the beer sold in the colony. Lawrence would evolve from a brewing victualler into a common brewer and Blaxland would establish himself as a common brewer dealing mainly through beer retailers. Byrne and Jones held spirits and brewing licences in 1815. Byrne’s brewery was probably attached to his Sydney public house and he is best described as a brewing victualler. Jones, on the other hand, brewed in Windsor but had his spirits licence in Sydney. No doubt it sold his beer, and was presumably a profitable operation in its own right.

⁴⁵⁴SG, 20 January 1805.

⁴⁵⁵Mathias, *Brewing Industry*, p. 104.

⁴⁵⁶J. T. Campbell to D’Arcy Wentworth, 15 February 1816, AONSW, Col. Sec. 4/3494, p. 366.

Macquarie's order of 27 January 1816 seems at a first reading to have banned brewing victuallers. Section four states 'That Persons obtaining Brewing Licenses shall not retail Spirits or Beer'. The wording is unclear, but subsequent events show that brewers were not prohibited from obtaining a licence to retail spirits or beer, but rather that the order was making it clear that a brewing licence did not entitle the holder to retail spirits, wine or beer. In 1816, Jones renewed his brewing and spirit licences; Lawrence renewed his brewing licence and took out a spirits licence for the first time; and, as discussed above, Macquarie actually ordered that Squire be forced to take out both licences.⁴⁵⁷ This section of the order may well have been prompted by Squire's notorious abuse of his brewing licence.

Jones and Lawrence continued to hold spirits licences in 1817 and 1818. In 1818, Jones had licensed premises in both Windsor and Sydney. Lawrence's public house at the sign of the Pine Apple was on a different site to his brewery. The licence was not renewed in 1819. Like Squire and Rushton, Lawrence turned his attention to establishing his own beer shops. Beer licences had fallen to only 6 in 1820, but increased dramatically to 31 in 1821. Cooper and Middleton established themselves as common brewers in 1821. Of the eight brewers in 1821, only Byrne in Sydney, Curtis at Parramatta and Kable at Windsor operated as brewing victuallers, and their contribution to local beer production must have been quite small. Byrne continued to hold spirits and brewing licences in 1820 and 1821. Ann Curtis set up with both licences in 1821. In 1820, George Kable applied for a licence to brew and 'for sale [of] Beer at the said house'.⁴⁵⁸ He renewed both licences in 1821, but only applied for a brewing licence in 1822.⁴⁵⁹

Part of the explanation for the dominance of common brewers is the licensing system which had a single, flat rate fee. For a publican who wished to

⁴⁵⁷For Lawrence, see SG, 16 April 1816.

⁴⁵⁸Dated 9 February 1820, Wentworth Family Papers, ML, A764, p. 101 (CY 727, p. 265).

⁴⁵⁹SG, 24 February 1821; Application dated 16 February 1822, Wentworth Family Papers, ML, A765, p.133 (CY 727, p. 492).

supply a barrel of his own beer each week, the £25 licence was a considerable disincentive. In 1816, the wholesale price of strong beer was about 2s a gallon and the largest brewers were already producing perhaps 50,000 gallons a year. For them, the licence fee worked out at 6d for fifty gallons, or half of one per cent of the wholesale price. If a publican produced two thousand gallons a year, the fee was 12s 6d for fifty gallons, or 12.5 per cent of the wholesale price. If the publican produced only 1,000 gallons, the fee would be 25 per cent of the wholesale price. The small brewing victualler was placed at a distinct disadvantage by the licence fee. D'Arcy Wentworth's comments point in this direction. In response to a series of leading questions from Commissioner Bigge, he agreed that the £25 brewing licence was too heavy, and had no doubt that if it were removed, the number of brewers would increase and, less convincingly, the quality of their product would improve 'on Account of the Competition it would occasion'.⁴⁶⁰ These competitors would presumably be smaller brewers.

The arrangements in the colony can be contrasted with those in Britain. Until 1784, the brewing licence in Britain was a flat fee, which therefore favoured the larger brewer. From 1784, this changed to a flat fee of £1 10s for brewers producing under 1,000 barrels a year, to £50 for brewers producing more than 40,000 barrels.⁴⁶¹ This still favoured the larger brewer over the smaller, although the fee for a small brewing victualler was trivial. The £25 flat fee in New South Wales was a much more significant impost on the small brewer. The bonds required from the brewer of £100 and of £50 each from two sureties only added to the pressure on the small brewer.⁴⁶²

The definition of a common brewer was also more generous in New South Wales. The early government orders were unclear about the minimum quantity which a common brewer could sell. In 1811, Macquarie had defined anyone dealing in quantities of spirits or wine of less than two gallons as a retailer, but

⁴⁶⁰Evidence of 19 November 1819, in Ritchie, *Oral Evidence*, p. 53.

⁴⁶¹Mathias, *Brewing Industry*, p. 368.

⁴⁶²Notice of 25 January 1811, in SG, 26 January.

was silent on the minimum quantity of beer which a brewer or importer could sell without a retail licence.⁴⁶³ Kable and Woodbury's advertisement in that year has a minimum amount of five gallons for private customers, while in 1816, Rushton advertised that he sold in quantities of four gallons or more to private customers. In 1817, the definition of retail was changed from 2 gallons to 5 gallons for wine and spirits, but again beer was left out.⁴⁶⁴ The position was not clearly stated until Governor Brisbane's order of 8 February 1825, when retailing was defined as selling any liquor, including beer and cider, in quantities under five gallons.⁴⁶⁵ In Britain, common brewers sold wholesale by the cask.⁴⁶⁶ Whether the minimum quantity which the common brewer could sell in the colony was two or four or five gallons, it was significantly less than in Britain, and opened up to the brewer a large market in small sales to householders which in Britain was largely the preserve of retailers.

But the explanation for the dominance of common brewing goes beyond the licensing arrangements. As with home brewing, the circumstances of the colony were not conducive to pub-brewing. The most effective use of skills and equipment in a new society favoured common brewers over brewing victuallers, just as it favoured commercial brewers over home brewers. In Britain, economies of scale in brewing were obvious in the vast porter breweries of London, but they clearly existed in the leading common brewers of New South Wales which quickly came to dominate the market. Fixed capital costs per unit of output fell with more constant use of equipment and with increases in the size of equipment. Variable costs would also have fallen. Large purchases of materials were probably made at a lower price per bushel or pound. Labour employed did not rise proportionately with the size of the mash tun or copper. A brewer with a 400

⁴⁶³Proclamation, 30 March 1811, HRNSW VII, p. 510.

⁴⁶⁴SG, 22 February 1817.

⁴⁶⁵SG, 10 February 1825.

⁴⁶⁶Mathias, *Brewing Industry*, p. 104. This appears to have changed later in the nineteenth century, when the 'private' trade of common brewers included orders for firkins, jars and bottles by the dozen (Gourvish and Wilson, *British Brewing*, p. 66).

gallon copper and three employees had a distinct advantage over a publican with a thirty gallon copper and an assistant. And all the while, the full-time common brewer and his staff were developing their skills to a greater degree than the occasional pub-brewer.

The small common brewer or brewing victualler had a strong incentive to grow. First, increased sales brought in increased revenue. As beer was a normal item of mass consumption for Englishmen, even the small population of New South Wales presented a domestic market which was large enough to allow for breweries to grow to a considerable size. Second, increased scale reduced per unit costs given the nature of the brewing process. But the gains from having a larger share of the beer market, and the advantages of large scale production, could not be realised unless the brewer could distribute his beer widely to households and retailers. This required cheap and reliable transport, which is discussed in the section on concentration, and retailers who would stock the brewer's products, to which we now turn.

Licensed Victuallers and Tied Houses

While common brewers in Britain dealt in minimum sales of a cask, in New South Wales they could make quite small sales of just a few gallons. This opened up a larger market for them in household sales, but purchases of four or so gallons were necessarily restricted to better off or at least better organised households. The greater part of a common brewer's market was through licensed victuallers who retailed to the public in pints and quarts for consumption on the premises. The relationship between the brewer and the retailer was therefore crucial to success. A brewer would look to establishing good relations with retailers, most obviously by selling a product of reasonable quality at a reasonable price, and by providing basic services such as delivering the beer and assisting in its handling. An important part of establishing and maintaining such a relationship might be

providing beer to the publican on credit. The relationship could become more complicated than this. A brewer might provide assistance to a retailer to set up, including paying his licence fee or standing surety for him at the annual licensing round. The publican in turn would be obliged to stock the brewer's beer. If such arrangements proved unsatisfactory the brewer could maintain his own public houses, taking out licences in his own name or, more commonly, owning the premises but with the liquor licences taken out by the publicans. Some form of tying appears to have been in place as early as the 1790s. After the establishment of liquor licensing in 1796, the most important development in the retail licensing system was the introduction of a beer only licence in 1810. This cheaper, restricted licence was introduced in response to petitioning by the brewers and was the object of further political pressure thereafter when the government moved to abolish it. By 1821, brewers relied heavily on their own retailing network, and in 1822 took concerted political action to ensure that their business interests were not harmed by changes in government regulations.

Governor Hunter introduced licences for liquor retailers in 1796, following his unsuccessful attempt to prohibit retailing by 'self-licensed' public houses.⁴⁶⁷ In April 'Ten persons were selected by the magistrates and to them licences for twelve months under the hands of three magistrates were granted', at a fee of £20, with two sureties of £10 each.⁴⁶⁸ Shortly after, Hunter expressed his dissatisfaction that the issuing of licences had not resulted in a decrease in 'drunkenness and idleness', and warned licensees against trading spirits for grain.⁴⁶⁹ In August 1798, he issued a public notice urging 'that as the time of granting new licences... has been some time pass'd', the magistrates should 'proceed as early as they conveniently can to the renewal of such licences'. He recommended a reduction in the number of licences to fifteen – eight in Sydney,

⁴⁶⁷The Government and General Order of 22 March 1796, HRA I, pp. 690-1, issued Hunter's directive against retailing.

⁴⁶⁸Collins [1798, p. 471].

⁴⁶⁹Government and General Order, 18 June 1796, HRA I, p. 693.

four in Parramatta and three in the Hawkesbury – as ‘the number formerly granted was by far too many’.⁴⁷⁰ The magistrates ignored Hunter’s recommendation and issued 31 licences. The licence fee in 1798 is unknown but the licensee and one other surety now only gave recognizances of £5 each.⁴⁷¹

The records of the licences issued in 1796 and 1797 are lost but the 1798 record is extant. In that year, Squire took out a licence for his tavern at Ryde – the Malting Shovel – from which he no doubt sold his own beer as well as imported spirits and wine. By contrast, none of the partners of Boston & Co. held a retail licence. But John Boston stood surety for three liquor licensees: David Bevan at the Union, in Sydney; Richard Cheers of the Black Bull, also in Sydney; and William Higgins at the Ships, in Parramatta. Only Bevan renewed his licence in 1799, with Boston again standing surety.⁴⁷² Bevan was a businessman of some ability who was to become a leading auctioneer. Presumably, the Union was making money. Cheers’s reason for not renewing is unknown but Higgins may well have been forced to close by the decision of the Parramatta magistrates to require two securities of twenty pounds each rather than one security of five pounds as previously.

The evidence is only circumstantial but it is possible that Boston’s relationship with the liquor licensees went beyond a purely personal agreement to stand surety for a friend or acquaintance. It was a general practice in the colony for wholesalers of imported goods to assist retailers in setting up shop, in particular, by extending credit.⁴⁷³ Boston & Co. imported spirits and wine and engaged in a number of manufacturing activities, of which brewing was the most successful. It is very possible that these retailers dealt with Boston & Co. for their

⁴⁷⁰Government and General Order, 6 August 1798, HRA II, p. 219.

⁴⁷¹Bench of Magistrates, Sydney, Licences Issued 19 September 1798, AONSW, SZ766, pp. 90-2 (COD, pp. 1-3).

⁴⁷²Bench of Magistrates, Sydney, Licences Issued 19 September 1798, AONSW, SZ766, pp. 90-2 (COD 198, pp. 1-3); General Meeting of Magistrates for the purpose of Licensing Victuallers, 14 September 1799, AONSW, SZ767, pp. 114-5 (COD 198, pp. 5-7).

⁴⁷³G. J. Abbott, ‘Economic Growth’, in G. J. Abbott and N. B. Nairn (eds), *Economic Growth of Australia 1788-1821*, Melbourne University Press, 1969, p. 160.

beer, wine and spirits. It is interesting that the licences were in both of the major settlements. For the same reason, it is interesting that in 1799, Squire renewed his own licence, and also stood surety for William Roberts of the King's Arms in Sydney.⁴⁷⁴

By Governor King's order of 27 October 1800, the retail licence fee was reduced to only £3, with recognizances of £20 from the licensee and from each of the two other sureties of £10.⁴⁷⁵ As discussed above, there was some confusion or feigned ignorance over whether the licensing order applied to the retailing of beer. The licences issued to victuallers in 1798 were 'for Retailing Vinous and Spirituous Liquors'. King's order of 27 October 1800 used various terms: 'excisable liquors', 'strong drinks', 'liquors' and 'spirituous liquors or other strong drinks'. The same order dealt with the issuing of permits for the movement of 'spirits or other strong drink' which were defined as spirits and wine. No restrictions were placed on the movement of cider or beer, just as no restrictions were placed on their importation. The lack of clarity was exploited by some of Sydney's many bush lawyers, forcing King, in April 1806, to issue a further order making it clear that he 'positively forbids the Retail of Spirits by those who are not licensed; which if not before understood, is now ordered to include Vendors of Cyder, Beer, etc unless they have a Licence for that particular purpose'.⁴⁷⁶ The target of King's order was not the unlicensed retailing of beer but of peach cider, which was widely made at the time.

The wording of King's 1806 order suggests that separate licences were issued for retailing beer only. Marion Phillips writes that beer licences were

⁴⁷⁴General Meeting of Magistrates for the purpose of Licensing Victuallers, 14 September 1799, AONSW, SZ767, pp. 114-5 (COD 198, pp. 5-7).

⁴⁷⁵HRA III, p. 35. The fee went to the Treasurer of the Orphan Fund. A lodgement fee of 2/6, payable to the clerk, was also charged. It is never stated whether the sureties were submitted or pledged. The latter seems most likely in the absence of any records of receipts given or cash received in accounts, or any statement of where the sureties, which would have totalled hundreds and then thousands of pounds, were to be deposited.

⁴⁷⁶SG, 13 April 1806. This refers to an order of 10-October 1800 which dealt with duties on spirits, wine and beer imports, rather than to the order of 27 October which dealt with retail licences.

issued in 1804 at a lower rate than spirits licences.⁴⁷⁷ Unfortunately, she gives no source for this claim, and there is nothing in the proclamations issued in 1804 on the matter. It is possible she is referring to the order of 25 September 1804 advising that beer from the government brewery was available to, among others, licensed people.⁴⁷⁸ If beer licences were being issued by King they lapsed during Bligh's administration. Under Bligh, licences for public houses were issued by the Bench of Magistrates on 1 January 1807. Each licensee stood surety of £25 and had two sureties who gave recognizances of £50 each.⁴⁷⁹ In 1808, 112 liquor licences were issued (see Table 5.1). The rebel administration maintained the system and issued 101 licences in 1809.

Macquarie's new broom was quickly applied to cleaning up alcohol retailing in the colony. In his order of 16 February 1810 Macquarie announced a dramatic reduction in the number of spirits licences. Only 31 licences were to be issued in the colony; in Sydney the number was to be reduced from 75 to 20.⁴⁸⁰ Following representation from the principal brewers at Sydney of the 'great accommodation to the labouring people, and to the lower classes of the inhabitants in general, to have plenty of good, wholesome beer for their drinking, and permitted to be retailed to them at a moderate price', and in order 'to encourage the settlers throughout the colony to grow barley', Macquarie introduced a beer only licence in mid-1810. Fifty licences were to be granted in Sydney at £5. The licensee had to stand surety of £25 and find another person to provide a similar security.⁴⁸¹

The Governor promised that those retailing beer without a licence would be 'prosecuted with the utmost rigour of the law'. Nevertheless, it was represented

⁴⁷⁷Phillips, *Colonial Autocracy*, p. 96.

⁴⁷⁸HRA V, pp. 272-3.

⁴⁷⁹SG, 28 December 1806.

⁴⁸⁰SG, 17 February 1810; Macquarie to Castlereagh, 30 April 1810, HRA VII, p. 250.

⁴⁸¹SG, 21 July 1810. The first issue of 26 licences had occurred on 25 June 1810, followed by 15 more on 26 June, 4 on 7 July, and 1 on 10 July, see Bench of Magistrates, AONSW, SZ 771, pp. 53-4, 66-8 (COD 198, pp. 11-19). Four more must have followed shortly after.

to the governor later in the year 'that several persons continue to sell beer and cyder' without a licence, 'to the prejudice of the licensed retailers and the injury of the revenue'. Fines of £20 per offence were therefore introduced on 31 December, 'half to be paid to the informer and the other half to go in aid of the Police Fund'. The granting of beer licences was also to be extended to the settlements outside of Sydney. Four for each district and township were to be granted.⁴⁸²

Macquarie's order establishing beer only licences was very similar to the Beer Act passed in Britain in 1830. In order to promote the consumption of beer instead of spirits, the Act enabled any householder in possession of a rateable household to sell beer upon payment of a fee of two guineas to the Excise. The beer could be consumed on or off the premises. The beer house, beer shop, or Tom and Jerry as it was colloquially called, was a quite different affair to the ale-house, inn and tavern, which were subject to considerable control by the magistrates through the annual licensing round and tended to be more substantial establishments. Most of the beer shops were in small shops or private households.

In countless cases the premises of a licensed beer-seller were of the humblest description, and the room in which customers were accommodated would frequently be a medley of kitchen, parlour, and hall – all in the most primitive style of English cottage life.⁴⁸³

Most of the beer shops in New South Wales would have been much the same.

The major difference between Macquarie's order and the Beer Act was the intention behind the latter to reduce the dominance of the large commercial brewers, which was particularly exercised through their control of many of the

⁴⁸²Government and General Order, 22 December 1810, HRNSW VII, pp. 473-4.

⁴⁸³Hackwood, *Inns*, p. 137. The various types of licences are discussed on pp. 135-40. For a careful, modern treatment of this misunderstood and misrepresented piece of free trade legislation, see Gourvish and Wilson, *British Brewing*, ch. 1.

existing conventional licences. Hopes that the beer houses would brew their own beer and reduce the growing dominance of the market by tied houses supplied by common brewers were quickly dashed. In New South Wales this had never been the intention. The brewers had agitated for the introduction of beer shops as a way of overcoming problems in getting general liquor licensees to stock local beer. Even if each beer shop only sold a dozen quart pots a day, total sales would have been nearly 55,000 gallons a year or at least half of total local output in 1810. Presumably, the brewers took an interest in who received beer licences, and where the licensees bought their beer from. One can only wonder whether Robert Cooper of Kissing Point, one of the beer licensees in 1811, stocked Squire's beer or the beer of a Sydney rival such as Rushton.⁴⁸⁴

For many retailers, a beer shop licence was undoubtedly a matter of taking second-best. According to Hackwood, magistrates in Britain encouraged the holders of beer licences to take out spirits licences in order to exercise more effective control over licensees. The licensing arrangements were different in New South Wales as the magistrates controlled the issuing of both types of licence. It is quite possible, though, that the magistrates, who had a long history of actions contrary to the wishes of the governor, may have accommodated the desire of beer licensees to hold full licences. Despite Macquarie's intentions during his first months in the colony, the number of full licences doubled in 1811. In 1812, they increased again – from 60 to 108 – and beer licences fell from 46 to 13 (see Table 5.1).

Fewer full licences were issued in 1813-5 and the number of beer licences rose to 17. In 1815, Macquarie announced that he would be reducing the number of spirit licences and increasing the licence fee from £20 to £30.⁴⁸⁵ In pursuance of this order, a further order was issued in January 1816. It reduced the number of Spirit and Beer Licences to 64 and established

⁴⁸⁴SG, 16 March 1811.

⁴⁸⁵SG, 19 August 1815.

That every Person receiving a Spirit Licence shall be required to take out one for the Sale of Beer also and on Refusal to furnish Beer as well as Spirits when called for, shall incur a Penalty of Ten Pounds, on Conviction before a Bench of Magistrates, which Fine is to be levied under an Order of the said Bench, and to be paid to the Informer.⁴⁸⁶

While it might be thought the brewers would have welcomed the requirement placed on all publicans to stock beer, they were instead greatly agitated by the construction placed on the order that separate and cheaper beer licences were no longer to be issued. On 6 April, 66 general liquor licences were issued.⁴⁸⁷ Blaxland took the lead in a letter dated 11 May 1816.⁴⁸⁸ After detailing the hardships he had overcome in bringing his hop plantation to a state of profitability, he put it bluntly to Macquarie that ‘your last regulation respecting the Brewing business has defeated my hopes and in my humble opinion bids fair to annihilate the culture of the hop and the colonial brewing business altogether’. He explained: ‘Your late order doing away the beer licences and ordering no person to sell beer without a spirits licence which amounts to the sum of thirty pounds has with me at least had the effect to do away with my business almost intirely’. The obverse – that spirits licensees must stock beer – was of no benefit. ‘Persons who can afford to keep houses of such a description b[u]y porter or beer imported and are much above attending to the sale of colonial beer.’ And small houses for the poor preferred to deal clandestinely in spirits ‘most probably the greater part of it in colonial spirits illegally made’. He concluded that if no change was made to the policy, he would grow hops, and presumably brew, only for his family.

⁴⁸⁶SG, 27 January 1816.

⁴⁸⁷SG. The final number of liquor licences issued in 1816 was 69.

⁴⁸⁸AONSW, Col. Sec. 4/1735, pp. 63-6 (6045: 799-802). A second letter, dated 23 May 1816, written in a different hand, and containing much the same argument is on pp. 67-71 (803-7).

Macquarie was moved by the request. He announced that following representations from the principal brewers 'that the granting of beer Licences to those Persons only who took out Licences for the Retail of Spirits' was prejudicial to their interests, this part of the order of 27 January was rescinded. The number of beer licences to be allowed for the year was 32, at £5 each, to be issued by 8 June.⁴⁸⁹ This was to be a substantial increase on the 17 beer licences issued in 1815.⁴⁹⁰ In the event, only 21 beer licences were taken up. Sixteen of these were taken up in the second quarter, that is, as soon as Macquarie rescinded the order late in May. Another five were taken up at the end of June for the second half of the year.⁴⁹¹

Despite the importance attached to the beer licence by Blaxland, only 10 were taken out in 1817, and this fell to a mere 6 licences in 1820. Given that the brewing industry was expanding rapidly in 1820, brewers were clearly finding outlets through fully licensed premises, which had fallen to the lowest number in ten years, or through direct sales to households. The situation, however, was obviously not entirely satisfactory for the major brewers. In 1821, the three leading brewers – Squire, Rushton and Lawrence – and newcomer, Middleton, took a hand in establishing a number of beer shops. Thirty one full year beer licences were taken out, the biggest number since 1811.

After this substantial investment by the brewers, beer licences were again withdrawn in 1822, at least in Sydney. This time, the decision was taken by the Sydney Bench of Magistrates, rather than the Governor. The Colonial Secretary informed Rushton that the Governor 'cannot but acquiesce in the propriety of the decision of the Magistrates of Sydney not to grant any licences for the sale of Beer only'.⁴⁹² This drew a response from the four brewers, whose memorial

⁴⁸⁹Government and General Order, SG, 25 May 1816. Macquarie's Secretary, J. T. Campbell, informed Blaxland personally that this decision was made 'in consequence of the representations made by you and corroborated by others', 25 May 1816, AONSW, Col. Sec. 4/3495, p. 494.

⁴⁹⁰SG, 8 April 1815.

⁴⁹¹D'Arcy Wentworth Papers, ML, D1, pp. 139-55 (CY 417, pp. 116-128).

⁴⁹²11 May 1822, AONSW, Col. Sec. 4/3505, p. 269.

provides considerable insight into the nature of the industry at the end of the Macquarie era. '[F]ormerly your memorialists were allowed a certain number of Houses, each licensed for the retailing of their Beer'. The abolition of these licences had caused them 'great injury'. They reminded the Governor of the effort which had gone into the industry, the success which had been achieved, and the benefits to the colony. Their breweries had 'been established at very heavy expence'; 'the Hop is cultivated to great perfection in this Colony, the growth of barley is greatly increased of late years in consequence of the Brewer's Consumption of Malt'. They prayed that the Governor would 'aid and assist... by restoring a certain Number of Licenses to each Brewery', and, for good measure, by imposing a duty on imported beer.⁴⁹³ While the brewers' petition reads as if they held the beer licences, the licences were actually held by others. In 1821, Kable was the only brewer who had a beer licence in his name. Rushton's personal petition to the governor makes this clear. He depended 'solely on Persons receiving Beer Licenses for the support of his Brewery'.⁴⁹⁴ The brewers' 'possession' of the beer shops was clearly through other means, most obviously, direct ownership of the premises, loans to the licensees, or payment of the licensing fee and standing surety.

Brisbane relented or put pressure on the Bench of Magistrates. Sixteen beer licences were issued in 1822. Twelve of these were in the other jurisdictions, where the magistrates had not decided to do away with beer licences. Eight full year licences were issued in Parramatta, three in Windsor and one in Liverpool⁴⁹⁵ The three licences issued by the Windsor bench were for Windsor, Richmond and Pitt Town.⁴⁹⁶ Only four licences, each for six months, were issued in Sydney

⁴⁹³The Memorial of the Brewers of Sydney to Sir Thomas Brisbane, undated 1822, AONSW, Col. Sec. 4/1763, pp. 149-50a (6056).

⁴⁹⁴Petition of Thomas Rushton That Beer Licenses may be granted, undated 1822, AONSW, Col. Sec. 4/1763, pp. 259-60 (6056).

⁴⁹⁵Colonial Fund accounts for first quarter of 1822, SG, 30 January 1823. The full year account for the Colonial Fund (in HRA XI, p. 211) has fourteen licences issued, the equivalent of twelve full year and four half year licences.

⁴⁹⁶SG, 22 March 1822.

following the reversal of the decision of the Sydney magistrates. The following year, the number of beer licences in Sydney recovered, to 21. But there were only two in Parramatta, none in Windsor and one for six months in Liverpool. The decline in beer licences in Parramatta and Windsor was matched by an increase in the number of full licences. Total full year beer house licences rose from 12 in 1822 to 38 in 1825. In 1826 the fees of both general and beer only licences were set at £25.⁴⁹⁷ There was no reason for taking out a limited licence at the same cost as a full licence and beer licences simply disappeared (see Table 5.1).

Like Blaxland before him, Rushton drew attention to the difficulty of placing local beer with the holders of general liquor licences. The considerable quantity of imported porter was 'principally purchased by the Liquor Merchants and by them sold to those Publicans they supply with Spirits, very few of them selling Colonial Beer'.⁴⁹⁸ It does not appear that the brewers branched out into spirits and wine wholesaling as a way of giving them access to more of the general licensees. There was no doubt an element of truth in Rushton's claim. In 1820, the famous publican, James Larra sold a cask of English porter a month and probably did not stock local beer.⁴⁹⁹ But his house was decidedly up-market, and other general licensees must have stocked local beer, especially in those years when there were few beer licences issued such as 1820 and 1822. Bulk household purchases were an important part of the brewers' business, but it seems unlikely that the total volume of local beer being produced in 1820 could have been sold directly to households or by beer shops. Some of the brewers had at times their own fully licensed premises, although by 1820 only Squire still operated a tavern of his own. It seems likely that brewers had forged commercial links with general licensees well before beer shops disappeared in 1826.

⁴⁹⁷Public Houses Act, VII Geo. IV, No. 2 (20 February 1826), in *Copies of the Laws and Ordinances Passed by the Governor and Council of the Colony of New South Wales 1826*, House of Commons, Parliamentary Papers, 1828 (335), vol. XXI, p. 341.

⁴⁹⁸Petition of Thomas Rushton That Beer Licenses may be granted, undated 1822, AONSW, Col. Sec. 4/1763, pp. 259-60 (6056).

⁴⁹⁹Evidence to Bigge, 6 January 1821, ML, BT 1, p. 365.

In England, breweries owning licensed premises became more common in the eighteenth century, and direct ownership and other less direct forms of tying took off from 1790.⁵⁰⁰ Tying was one of the most obvious features of the transformation of British brewing into an industry dominated by a relatively small number of large common brewers. It was an equally important and well-documented feature of the same transformation in Australia in the second half of the nineteenth century.⁵⁰¹ In the relatively informal commercial world of early Australia few records have survived but they are enough to show that the major brewers had a number of their own licensed premises by 1821. While this was in part a response to the particular problem of finding outlets among general liquor licensees, the more arresting feature of this development is that it was a necessary corollary of the dominance of the brewing industry by a relatively small number of common brewers. A surprisingly modern structure of production had given rise to, and required the existence of, a modern structure of distribution.

Specialisation

For Boston and Co. in the 1790s, brewing was only part, although one of the more profitable parts, of a precocious business 'empire' which encompassed the full range of colonial economic activity: agriculture, sealing, coalmining, salt and soap making, grain milling, ship building, importing and retailing. Andrew Thompson had a narrower, though still diverse, range of business interests until his death in 1810, including agriculture, shipping, saltmaking and brewing.⁵⁰² Gregory Blaxland was an important figure in grazing and trading, and a tireless proposer of ideas to the Governor, most of which were rejected.⁵⁰³ Most of the

⁵⁰⁰Mathias, *Brewing Industry*, pp. 119, 122.

⁵⁰¹G. J. R. Linge, *Industrial Awakening*, Australian National University Press, Canberra, 1979, pp. 315, 520.

⁵⁰²The Humble Petition of Andrew Thompson, 10 January 1810, AONSW, 4/1822, no. 307, Fiche 3009.

⁵⁰³Jill Conway, 'Blaxland, Gregory', ADB, vol. 1, pp. 115-7. For his schemes, see Campbell to

brewers, however, had narrower business interests which were more squarely focused on manufacturing. As Steven points out, emancipists were more likely to go into manufacturing than free settlers, as they had difficulties in getting large grants of land and were more likely to have a background in manufacturing.⁵⁰⁴ Boston and Blaxland stand out as being free settlers, although Boston's partner, Thomas Palmer, was a political exile. Almost all of the other brewers to 1820 had arrived as convicts: Squire, Rushton and Lawrence; Thompson and Henry Kable; West, Evestaff and Byrne.⁵⁰⁵ Most had a background in manufacturing and some, such as Squire and Rushton (and Boston), had training in or some association with brewing. West seems to have come to brewing after success in the building game.⁵⁰⁶ Kinsela was a soap maker and manager of the government salt works in Rose Bay before taking up brewing.⁵⁰⁷ Byrne had also run the salt works and been an illicit distiller. Thompson was the son of a small-time Scottish cloth manufacturer.⁵⁰⁸

Further, the brewers naturally specialised in manufactures which were either directly related to brewing, such as vinegar, or which required similar equipment and expertise, such as soap and candles. In Britain, malt vinegar was more widely made than wine vinegar. A simple method involved adding rape to beer and placing it in the sun for about a month.⁵⁰⁹ For the brewer, vinegar was the perfect use for sour or poor quality beer. Boston & Co. had made vinegar in the 1790s and in 1814 Blaxland wrote to Macquarie that following the success of

Blaxland on colonial currency (3 January 1814) and vinegar manufacture (18 July 1814), AONSW, Col. Sec. 4/3493, pp. 2 and 217; and Blaxland to Lord Bathurst on wine, 4 September 1816, AONSW, Col. Sec. 4/1735, pp. 115-22 (including a covering letter to Macquarie, 21 October 1816).

⁵⁰⁴M. J. E. Steven, 'Enterprise', in G. J. Abbott and N. B. Nairn (eds), *Economic Growth of Australia 1788-1821*, Melbourne University Press, 1969, p. 128.

⁵⁰⁵The last three were granted their certificates of freedom on 9 June 1810 (Public Notices, 9 June 1810, AONSW, Col. Sec. SZ 758, pp. 51, 56).

⁵⁰⁶Robert Campbell paid West £245.5.0 for building work on 1 May 1809 (Account dated 24 May 1816, accompanying a letter from Campbell to Macquarie, AONSW, Col. Sec. 4/1735, pp. 74-6).

⁵⁰⁷SG, 25 January 1807.

⁵⁰⁸J. V. Byrnes, 'Thompson, Andrew', ADB, vol. 2, pp. 519-21.

⁵⁰⁹This recipe is produced in SG, 8 June 1806.

his brewery, he wished 'to extend a branch of the same business to the making of vinegar'.⁵¹⁰ There was also a longstanding association since Boston & Co. between brewing and the making of candles and soap. Kinsela informed the public at the commencement of his brewing career, that 'Hard Soap [would be] manufactured as usual'.⁵¹¹ Leading brewers in the 1820s and 1830s – Dickson and Mackie – made soap and candles, and also had a flour mill, an activity with a clear relationship to brewing which had been exploited by Boston & Co. in the 1790s.⁵¹² Similar connexions were shown by other manufacturers. James Wilshire was a tanner by trade in England. He established a tannery at Brickfield Hill in 1803, which quickly become the biggest in the colony and continued in operation for two decades after his death in 1840. He also made soap, candles, glue and parchment. A few years after starting his tannery he had built a brewery but soon after leased it to Rushton. When Rushton left in 1809, Wilshire tried unsuccessfully to let the brewery again. While apparently conversant with brewing, he let the brewery lapse and presumably applied the building and equipment to his other concerns.⁵¹³

Interestingly, the three leading brewers were narrower still in their interests. Squire engaged in the conventional agricultural pursuit of supplying the government store with meat and grain and also had extensive orchards.⁵¹⁴ But a good deal of his farming activity was directly connected with his brewery. Much of his grain and all of his celebrated hops were headed for his mash tun and copper. His tavern was similarly a profitable venture in its own right but also related to his brewery. Among contemporaries, there was no doubt that Squire's fame, and his business, rested on brewing. Rushton was exclusively a brewer from his arrival in Sydney in 1804 to his death in 1822. Lawrence began as a

⁵¹⁰Memorial, No. 40, 3 July 1814, AONSW, Col. Sec. 4/1730, pp. 166-7.

⁵¹¹SG, 29 January 1809.

⁵¹²SG, 16 October 1830.

⁵¹³G. P. Walsh, 'Wilshire, James', ADB, vol. 2, pp. 608-9; SG, 16 October 1830.

⁵¹⁴He supplied 1,000 lbs of pork to the store, for example, in June 1813 (SG, 26 June 1813).

brewing victualler, and baked bread and served food. He had a public house in the 1810s, and he retailed other goods on the side, selling Glauber's salts, for example.⁵¹⁵ But his chief interest was brewing and this was certainly the case from 1813 when he became a common brewer. In 1820, he reported, only somewhat inaccurately, that his 'time and attention have for the last 14 years been entirely devoted' to brewing.⁵¹⁶ For all of 'the big three', brewing was their chief or sole occupation. They did not engage in other manufactures, and did little or no trading in other goods. Only Squire had any agricultural interests which were unrelated to brewing.

The lesson would appear to be that the most successful brewers were those who specialised the most, although an equally plausible interpretation is that successful brewers specialised. Rushton is an example of the first direction of causality; Squire and Lawrence show something of the second. Certainly, those businessmen finding success in brewing naturally devoted more of their attention to this line of business. Their breweries necessarily got bigger and this in turn led to economies of scale. As total revenue rose and per unit costs fell, profits rose, which financed further expansion (and also prompted entry by others). This was the story of Squire, Rushton and Lawrence. Their breweries in 1821 were the product of long, patient and focused careers. Squire had begun to brew a few years after settlement and had devoted most of his life in the colony to his brewery and hop field. Rushton had received his chance as the government brewer in 1804, and from then on made his way as the lessee of the government brewery and then of a private brewery, before moving to his own premises and also developing a significant hop field to supply his brewery. Lawrence had progressed from brewing victualler to common brewer, and in 1820 was able to think of establishing a porter brewery on a large scale. These few, longstanding, relatively large, specialised common brewers dominated the market by 1820.

⁵¹⁵SG, 26 August 1815.

⁵¹⁶Memorial to the Judge Advocate, 23 February 1820, Wentworth Family Papers, ML, A764, pp. 149-50 (CY 727, pp. 315-6).

It is a sign of the development of the colony and of the brewing industry that in the 1820s, successful new breweries were established from the start on a large scale, most notably the Australian, Steam Engine and Albion. Archibald Bell's advice to Bigge in 1820, that 'one or more persons, possessing small capitals & thoroughly acquainted with the art of Malting & Brewing should be invited to settle by some adequate encouragement from Governmt', revealed a complete lack of knowledge of the state of the industry.⁵¹⁷ Wentworth's advice in 1819 that a brewer establishing in the colony would need to command capital of 'five thousand pounds and upwards' was a far more perceptive acknowledgement of the competitive advantage of the larger of the existing breweries.⁵¹⁸

Integration

While specialising in the business of beer, the major brewers did not specialise in the manufacturing stage of the industry, let alone in a particular stage of manufacturing. Brewing is a relatively complicated process which does not lend itself to being done by different firms. The three stages of brewing – mashing, brewing (or boiling) and conditioning – do not produce readily saleable goods and are almost invariably done by the one business. On the other hand, those parts of the industry outside of brewing itself – the supply of grain and hops; malting; the supply, repair and cleaning of casks, and the supply and cleaning of bottles; and distribution to retailers – do provide scope for specialisation by other businesses. Inputs in particular were purchased by most brewers, although some of the larger brewers supplied some of their own grain and hops. The supply of inputs is discussed in detail in Chapter 6. Larger brewers also attended to their own malting, cooperage and distribution. Small brewers were more likely to purchase all of their requirements.

⁵¹⁷Ritchie, *Written Evidence*, p. 63

⁵¹⁸*New South Wales*, p. 420.

Those brewers with large landholdings like Squire and Blaxland produced a significant part of their own grain, although Squire was purchasing grain in relatively large quantities in 1804 and by 1820 was buying maize and wheat from Hawkesbury and Van Diemen's Land. It is doubtful Squire would have supplied even half of the 8,000 bushels of grain he would have needed in 1820.⁵¹⁹ Rushton and Lawrence appear to have bought all of their grain and this was the case for most, perhaps all, of the smaller brewers. There was little reason for brewers to grow their own grain. After the 'starvation years' of the early 1790s, grain production increased quickly. There were some large rises in prices, especially in 1806-7 after the Hawkesbury floods, but in the 1810s, prices were much more stable. As grain growing spread, the effect on prices of a disaster in a major district was lessened, and this was particularly the case when Tasmanian grain started arriving in larger quantities in the late 1810s. As pointed out already, the size of the largest brewers may have allowed them to negotiate a discount on grain purchases. Most certainly, the brewers were a significant and permanent part of the demand for grain. If Squire's length was typical of other brewers, commercial brewers used over 30,000 bushels of grain in 1820, all but a few thousand bushels of which were purchased from growers. In 1819, the Commissariat's total purchases of grain were 63,642 bushels. This was the highest year for the Commissariat in the 1810s.⁵²⁰

Hops were a different matter. Hop growing is a relatively costly and risky investment compared to grain growing, and unlike grain, the demand for hops is almost entirely derived from brewers. Four of the five large common brewers in the 1810s – Squire, Rushton, Blaxland and Kinsela – established their own hop fields. The exception was Lawrence who like all of the smaller brewers purchased his hops. The larger brewers put considerable energy into their own hop

⁵¹⁹This is an estimate of his grain use, based on his output of 2,000 hogsheads, his figure of eight bushels to a hogshead of his best beer, and an assumption of an equal length of small beer after the first mash for his strong beer.

⁵²⁰Fletcher, *Landed Enterprise*, p. 237.

plantations, and observers like Wentworth thought it essential for a large entrant into the industry to establish his own plantation, making 'arrangements to be supplied with hops from this country' (Britain) until the plantation was established.⁵²¹ But in fact, even large hop growers in 1820 such as Squire and Rushton supplied only a part of the hops they used. Brewing had developed in the previous two decades using imported hops, and this continued to be the case in the 1820s. Rushton was something of an exception. He used imported hops for many years but appears to have relied more heavily than other brewers on his own supply in the late 1810s, which may explain his cessation from brewing in 1819, when his hop crop failed. In both 1820 and 1821, hop imports were about 20,000 lbs, sufficient for 320,000 gallons of local beer. It is very hard to estimate total hop production but it is unlikely to have been more than a third of imports. As Wentworth confirmed, most of this production was in the hands of the larger brewers, although Squire, Kinsela and Blaxland had sought to encourage the development of local hop growing by actively selling hop cuttings.

The involvement of some of the larger colonial brewers in grain and hop production was a response to the circumstances of the infant colony. But the larger part of production was nevertheless from purchased inputs, as in Britain, and the development of well-organised markets for inputs is a more remarkable feature of the industry than the better documented successes of some brewers in growing hops. In the case of hops, brewers made spot purchases directly from ships' captains or merchants, or made contractual arrangements for a regular supply through a London agent (for which see Chapter 6). In the case of grain, larger brewers purchased directly from growers, often by advertising their requirements and receiving tenders. Selecting good grain is an important skill for the brewer. Advertisements in 1804 for the government brewery and Squire's brewery specified that growers submit samples for inspection. Over time, a brewer would seek to acquire detailed knowledge of the market for inputs. 'Only

⁵²¹*New South Wales*, p. 420.

by exact comparisons between the parcels bought from different makers in each different region could the brewer discover the most efficient raw material suppliers, price matched against quality, and maintain consistency in his product.’⁵²² Squire showed this detailed knowledge in his evidence to Commissioner Bigge. ‘The best maize I procure is from the Hawkesbury, from the farms of P. Bushel, Yeoman and Kelly.’⁵²³

Grain is made into malt before the brewing process begins. In Britain the relationship between brewing and malting was changing. In the old agrarian economy, the brewer was ‘corn buyer, maltster, brewer and innkeeper’.⁵²⁴ As some brewers gave up retailing to concentrate on brewing they usually continued to do their own malting, although there were notable exceptions. In the Midlands countryside, dominated by brewing victuallers, independent maltsters ‘might be the most powerful men in the commercial chain and hold the initiative to the extent of buying up public houses run by Brewing Victuallers to secure their markets for malt’. Larger common brewers might have recourse to maltsters, especially during periods of peak production or expansion. London was the great exception. Throughout the eighteenth century, the great porter breweries bought their malt, which was largely made outside London. It was only at the end of the century that some London brewers started turning their attention to malting, and this was not a uniform change in the industry.

Business practice in Britain in regard to malting was quite diverse. In the colony the position was much more straightforward. Wentworth wrote that the existing large brewers did their own malting and that a brewer who would establish successfully in the colony would need to do the same, ‘since there are no regular maltsters yet in the colony’.⁵²⁵ The simple explanation is that in the

⁵²²Mathias, ‘Brewing archives: their nature and use’, in L. Richmond and A. Turton (eds), *The brewing industry: a guide to historical records*, Manchester University Press, 1990, p. 27.

⁵²³29 December 1820, in Ritchie, *Oral Evidence*, p. 116.

⁵²⁴The following discussion of British experience is from Mathias, *Brewing Industry*, pp. 465-9.

⁵²⁵*New South Wales*, p. 420.

circumstances of the colony, the big brewers themselves were the entrepreneurs with the skill and capital to establish maltings large enough to supply their needs. While there were no large, independent maltsters, there were smaller businesses which did some malting. In 1822, Thomas Clarkson applied for a brewing licence.⁵²⁶ He was 'a baker and malter by trade' who had operated from premises in Hunter Street since at least 1811.⁵²⁷ It is quite possible that small maltsters like Clarkson supplied the occasional needs of the large brewers and most of the needs of the small brewing victuallers. The rules for bringing produce to Sydney's public market in 1810 specifically mention barley, hops and malt.⁵²⁸ Again, this would mainly have been a source of materials for smaller brewers.

Other aspects of the business were conventionally done in-house by the breweries. In British breweries of the time, a third of capital could be in casks. In London, the manufacture of casks was dominated by the Coopers' Company, but in the country, brewers made their own.⁵²⁹ In early Australia, brewers could buy secondhand casks, but the number of casks arriving in the colony carrying goods of all descriptions, while large, was never enough for the colony's purposes. They also required careful cleaning. The larger brewers had their own cooperages, where several staff were engaged in the vital tasks of making, repairing and cleaning barrels.⁵³⁰ Given the constancy of the work, even a smaller brewery would have its own cooper. Henry Perts was a cooper who was transported to the colony in 1815. He spent seven years in the service of the brewer John Jones at Windsor, during which time he obtained his ticket of leave. In 1822 he was

⁵²⁶Wentworth Family Papers, ML, A765, pp. 502-4.

⁵²⁷Humble Petition of Thomas Clarkson [for mitigation of sentence], 2 February 1810, AONSW, Col. Sec. 4/1846, pp. 49-49a (F3164); Coroner's Report, 7 August 1811, AONSW, Col. Sec. 4/1726, pp. 237-8; Respectful Memorial of Thomas Clarkson to the Governor, 28 February 1822, AONSW, 4/1829 No. 54 (F3043).

⁵²⁸SG, 20 October 1810. The new market was opened 4 March 1809, see SG 5 March 1809.

⁵²⁹Mathias, *Brewing Industry*, pp. 54-5.

⁵³⁰See, for example, the description of Thompson's brewery in SG, 8 December 1810.

residing with Ann Curtis, the brewer and licensed publican at Parramatta, following his trade.⁵³¹

Brewers could also place some of the cost of cooeping onto their clients. In 1804, the government brewery advised customers receiving beer from the brewhouse to bring their own casks, and to remove them at their own expense. To address the shortage of casks, the brewery advertised that it would accept payment for the beer in casks and iron hoops.⁵³² At the same time, Squire received kegs, barrels and 'other vessels' for filling at his brewery.⁵³³ Even in the late 1820s, the Steam Engine brewery was advising customers that 'Purchasers of smaller Quantities than a Hogshead, will be pleased to send their own casks'.⁵³⁴ In most cases, this was an imposition placed on small, private customers. Publicans received their beer in standard barrels and hogsheads, and even in 1804, the government brewery was delivering to licensed premises, with the barrels presumably being picked up when empty. Bottled beer was also sold by several brewers including Kinsela and Rushton.⁵³⁵ There was a thriving second-hand trade in the beer, wine and spirits bottles which came from Britain. In 1813, wine bottles of an unspecified size were selling for 6s a dozen.⁵³⁶ At prices such as this, Kinsela was no doubt typical of brewers in specifying 'the bottles returned or paid for'.

A common brewer, in giving up retailing, has taken on the task of wholesaling his beer, including getting new clients, delivering beer and keeping records. Rushton's transformation of the government brewery from early 1806 was based on a successful campaign of placing his beer in bulk in public and private houses throughout the colony. The distribution of thousands of gallons of

⁵³¹ Humble Petition of Henry Perts to Governor Brisbane, 12 September 1822, AONSW, Col. Sec. 4/1867, pp 11-11a (F3224).

⁵³² SG, 30 September 1804.

⁵³³ SG, 23 December 1804.

⁵³⁴ SG, 3 September 1828 and after.

⁵³⁵ SG, 2 June 1810, for Kinsela; 4 October and 22 November 1826 for Rushton.

⁵³⁶ SG, 11 December 1813.

beer a month was accomplished using his own wagon and driver and also, one suspects, private contractors. A number of vessels were providing regular services on the Parramatta River between Parramatta and Sydney, stopping also at places on the way, the largest of which was at Ryde. It is likely that Rushton used the river traffic for his Sydney consignments and his wagon for delivering around Parramatta and to the smaller nearby settlements such as Castle Hill. Squire, who had built the main wharf at Ryde by at least 1804, presumably used the river to supply both Parramatta and Sydney.⁵³⁷ Squire is known to have operated his own vessels, but with most of the river traffic stopping at his wharf, he was in a perfect position to get a good rate for transporting his beer.⁵³⁸ Regular and occasional deliveries to a large number of clients, many of whom received their beer on credit, required a level of bookkeeping which was unnecessary for the brewing victualler selling small quantities over the counter for cash. Unfortunately, only the fragmentary records of the government brewery survive.

Naturally, all colonial brewers engaged in the traditional sideliness of their business: supplying yeast to bakers, and spent grains to farmers. Brewers took yeast off the top of successful brews to start the next batch, but the amount of yeast produced was far more than they required. Brewers' advertisements frequently advised that yeast could be supplied to bakers and private families.⁵³⁹ Government institutions which made their own bread, such as the Hyde Park Barracks and the Male Orphanage School were another large market.⁵⁴⁰ In the brewing process, after the wort is drawn off from the mash tun, there remain spent grains which may be used in a second or even third run to extract more wort. At some stage, though, these brewers' grains are disposed of, usually to farmers as a

⁵³⁷SG, 5 August 1804.

⁵³⁸One of Squire's boats, containing a 60 gallon copper boiler, was stolen in 1809 (SG, 8 October 1809).

⁵³⁹For example, West in SG, 22 October 1809; Lawrence in SG, 6 March 1813.

⁵⁴⁰Statements of receipts and disbursements from the Colonial Fund, AONSW, Col. Sec. 4/424, pp. 81, 125, 141-2, 150, 176, 206, 213-4, 318, 320; Hutchinson to Goulburn, 5 February 1822, AONSW, Col. Sec. 4/1759; Male Orphanage School: Accounts and Vouchers 1823, AONSW Col. Sec. 4/7079, p. 217.

rich source of protein. The sale of brewers' grains as pig and cattle feed was a long established practice in Europe. In London the scale of brewing even saw the establishment of specialised intermediaries to deal with the trade between breweries and piggeries, cattle fattening yards and dairy farms.⁵⁴¹ In New South Wales, the trade was not so large, but it was active, especially for feeding pigs. Following the purchase of some hogs and pigs on 2 and 3 August 1807, John Blaxland became a major purchaser of spent grains from Rushton and Evestaff, with bills for grains over the next eleven months of £123.8.4.⁵⁴²

Concentration

Until the establishment of the government brewery in Parramatta in 1804 and Thompson's brewery at Windsor in 1806, the brewing industry was largely located in the major settlement of Sydney, in which Ryde might be included. Parramatta's brewery lasted to the end of the decade, and brewing there was not revived until the early 1820s. In Windsor, a brewery was operating for most of the years to 1821. But the greater part of production was still in the Sydney-Ryde area and most of this was in the hands of a few relatively large common brewers.

Sydney and Ryde had some technical and managerial advantages for the brewer. Summer temperatures were higher at Parramatta and Windsor, and so did not favour the hop grower, malter or brewer. Harbourside Sydney and riparian Ryde – Australia's little Burton upon Trent – were cooler. Archibald Bell took the opposite view. He thought that brewing using barley was more suited to the Hawkesbury than Sydney. 'About Sydney it may be [too warm]; but the winter half year in the neighbourhood of Windsor & Richmond is sufficiently cold for the purpose of Malting & Brewing.'⁵⁴³ But brewers had found greater difficulty

⁵⁴¹Mathias, *Brewing Industry*, pp. 41-2.

⁵⁴²Statement of Capital advanced by John Blaxland in his concerns from the 3rd day of April 1807 to the 17th of September 1808, AONSW, Col. Sec. 4/1727, pp. 200, 203, 205, 207.

⁵⁴³Oral evidence of Archibald Bell to Bigge, 27 November 1819, ML, BT 5, p. 2062.

with barley than enthusiasts like Bell suggest, and they preferred to brew all year round with maize and sugar, for which the milder climate of Sydney was more suitable. Sydney was also the port for the colony. Brewers there had the easiest access to ships and merchant houses bringing English hops and, from the late 1810s, grain from Tasmania.

The major advantage of locating in Sydney, however, was the simplest one: proximity to most of the customers. Sydney had about half of the population of New South Wales during the 1810s and was the port of call for sailors visiting the colony. The other main settlements at Windsor, Parramatta and Liverpool had roughly 5,500, 5,000 and 4,000 respectively.⁵⁴⁴ With a firm hold over their immediate market, the Sydney-Ryde brewers were able to achieve economies of scale which more than overcame any natural protection which the inland brewers might have enjoyed. This was particularly the case with Parramatta, which enjoyed good, cheap river transport to Sydney and Ryde. In 1821 the cost of sending a hogshead of beer from Sydney to Parramatta was 2/6, or 2.6 per cent of the wholesale price of strong ale.⁵⁴⁵ By comparison, British railways in the mid-nineteenth century permitted the massive development of the breweries of Burton upon Trent by transporting 36 gallon barrels 'quickly anywhere in Britain for around three shillings each (about five per cent of wholesale prices)'.⁵⁴⁶ In Georgian England, the freight of a barrel from Burton to London by river and canal had been as much as 12s.⁵⁴⁷ Transport costs in the small world of early New South Wales were very low for the larger part of the market.

Windsor was the furthest settlement from Sydney and it is here that a succession of brewers on some scale operated, although with only short-term success. Even here, water transport provided a link, with frequent vessel movements up the coast from Sydney and then along the Hawkesbury River to

⁵⁴⁴Robinson, 'Land', p. 86

⁵⁴⁵SG, 21 April 1821.

⁵⁴⁶Wilson, 'Brewing industry since 1750', p. 6.

⁵⁴⁷Gourvish and Wilson, *British Brewing*, p. 147.

Windsor, although this was a considerably longer trip than to Parramatta. Even those settlements away from river transport were still accessible to the brewers at a reasonable cost. Castle Hill, for example, was routinely served by Rushton's dray in 1806. Liverpool was a newer settlement, about fourteen kilometres from Parramatta, which had only reached a population of a thousand in the mid-1810s. By then the major brewers were perfectly capable of serving this market and brewing did not develop at all in Liverpool in the late 1810s.

A combination of water and land transport opened up much of the market beyond Sydney to the biggest and most efficient brewers in the colony and so allowed them to expand beyond the size dictated by their immediate local market. The New South Wales market for beer in 1820 was largely a single market dominated by a few large common brewers operating from Sydney-Ryde, but distributing their product widely. This is quite counter to the picture of small-scale, local brewers depicted by Farrer.

Although there were still many who brewed at home, especially in the country, brewing was the first part of the food industry to become centralized in factories under the impact of the Industrial Revolution and by 1815 eleven breweries were making 20 per cent of the English consumption. In due course this happened in Australia, but not for many decades for brewing began as a very personal activity and remained localized for a long time. Climate, combined with the general ignorance of the fermentation process, had much to do with this.⁵⁴⁸

He continues:

⁵⁴⁸K. T. H. Farrer, *A Settlement Amply Supplied: Food Technology in Nineteenth Century Australia*, Melbourne University Press, 1980, pp. 17-18.

That brewing was still a village technology in Australia's early days is evident from the number of breweries which began and ceased, their association with individual public houses, the discontent with the quality of the barley and the supply of hops, and the problems of malting and fermentation control in the warm climate.⁵⁴⁹

In a subsequent work, Farrer describes brewing in the colony as 'a farmhouse and village technology' and argues that 'poor technology, deriving essentially from lack of knowledge of things microbiological, together with the warm climate, was against any form of centralized brewing' in the age of Macquarie.⁵⁵⁰

Farrer is wrong about the structure of commercial brewing, which was characteristically not a personalised, localised activity where small-time brewing victuallers came and went. And he is wrong in relating the industry's structure, its 'village technology', and its problems in getting materials, and in malting and fermentation. The very idea that 'village technology' meant quick entry and exit is itself odd. Why would we expect small village brewers to buy equipment, brew for a few years, establish a local trade, and then give it away? In Britain, many small local breweries had been in existence for generations. Nor does village technology and 'lack of knowledge of things microbiological' preclude the development of larger commercial breweries. Pre-scientific knowledge based on observation and experience was the basis of brewing practice in Britain even in the second half of the nineteenth century when the science of zymurgy was being developed.⁵⁵¹ Finally, the supply of hops from England had grown broadly in line with the increase in beer production. The problems with colonial barley during malting and mashing had been addressed to a large extent by the use of maize.

⁵⁴⁹Farrer, *Ample Supplied*, pp. 18-19.

⁵⁵⁰K. T. H. Farrer, 'Food Technology', in Australian Academy of Technological Sciences and Engineering, *Technology in Australia 1788-1988*, Australian Academy of Technological Sciences and Engineering, Melbourne, 1988, pp. 73-4.

⁵⁵¹E. M. Sigsworth, 'Science and the Brewing Industry, 1850-1900', *Economic History Review*, 2nd ser., vol. XVII, 1964-1965, pp. 536-550.

And the problems with brewing and fermentation in a hot climate were dealt with by the use of cane sugar. Experimentation had led to a distinctive brewing practice which allowed for a relatively large-scale and centralised brewing industry in the late 1810s.

For the large brewers, the colonial style required speedy delivery of the product to consumers. Blaxland, no doubt smarting after his own withdrawal from the industry, declared that because of the heat it was impossible to brew beer that would keep. A palatable beer made of maize and sugar could be brewed all year and would keep for two to three weeks. It was well suited to small scale home production, he argued, but it would not pay to brew or stock beer on a large scale.⁵⁵² The evidence shows that it did pay to brew on a large scale, and the ability to brew maize and sugar beer throughout the year meant that brewers did not usually produce in winter and stock large quantities for consumption in summer. Rather, they maintained a continuous flow of beer throughout the year, sometimes actually increasing production in summer, contrary to British practice, in order to meet the increased demand for beer during the hotter months. These and other features of brewing practice are discussed in detail in Chapter 6.

By 1820, the brewing industry was a classic oligopoly: a relatively large industry concentrated in the hands of a few businesses competing in a single market. The concentration ratio for brewing in 1820 was similar to Australia in 1972-3, when four brewers accounted for 80 per cent of production.⁵⁵³ What this actually meant for the behaviour of the major brewers in 1820 is difficult to say. They were sufficiently few in number for price setting decisions to be influenced by the prices or expected reactions of competitors. Episodes of price competition can be observed in the 1820s, but, generally, price changes in the 1810s appear to have been infrequent, although there is too little information for this to be

⁵⁵²Blaxland's Memorial to Bigge, 2 January 1821, ML, BT 25, p. 5538.

⁵⁵³John Jackson and Campbell R. McConnell, *Economics Second Australian Edition*, McGraw-Hill, Sydney, 1985, p. 492. The industry in the 1970s, however, was different as the market for beer was strongly segmented into states having either a duopoly or monopoly.

anything more than an impression. The products of oligopolistic industries can be homogeneous or differentiated. Today, beer is usually regarded as a differentiated product, but according to Mathias, within its main market of London, porter from the great London breweries was 'very much a standard product, undifferentiated within the group of brewers producing it, but clearly distinct from all beers outside it'.⁵⁵⁴ This could not be said of colonial beer, where the names of the different brewers were well known and the relative merits of their products widely discussed. The intimacy of the market no doubt fostered this. In Britain, the practice of brewers putting their names on publicans' signboards became more common from the 1790s with the rise of tied houses.⁵⁵⁵ The distribution of colonial beer through tied houses probably involved an element of product identification, while direct wholesaling to consumers certainly made drinkers quite aware of whose beer they were buying. This was not simply a matter of branding beers which were quite similar in taste. While there was a strong tendency towards a colonial style, there were still significant differences in the practices of the brewers including the grains used.

Concerns about price fixing by major brewers were widely held in contemporary Britain.⁵⁵⁶ There was no similar criticism of the major colonial brewers, although they certainly did act in concert on matters of mutual interest in their dealings with government, taking up the important question of the beer licences and less creditably pressing government to impose duties on imported beer in 1822.⁵⁵⁷ There was little scope, however, for the brewers to restrict competition. Smaller brewers provided an alternative for consumers in Sydney

⁵⁵⁴*Brewing Industry*, p. 136.

⁵⁵⁵Mathias, *Brewing Industry*, pp. 137-8.

⁵⁵⁶Gourvish and Wilson, *British Brewing*, p. 6.

⁵⁵⁷The Memorial of the Brewers of Sydney to Sir Thomas Brisbane, undated 1822, AONSW, Col. Sec. 4/1763, pp. 149-50a. Rushton made his own representation on this in Petition of Thomas Rushton That Beer Licenses may be granted, undated 1822, AONSW, Col. Sec. 4/1763, pp. 259-60. Blaxland had similarly suggested an import duty six years before, see Blaxland to Macquarie, 11 May 1816, AONSW, Col. Sec. 4/1735, pp. 63-6 (6045: 799-802). A second letter, dated 23 May 1816, written in a different hand, and containing much the same argument, is on pp. 67-71 (803-7).

and at times elsewhere. It was a very open market with easier entry than in a mature oligopoly. Generally speaking, if a few large firms have come to reap significant economies of scale and dominate a market, the cost of entry is high. By 1820 the capital required for a large, competitive brewery was large – about £5,000 according to Wentworth – but this was not beyond a number of capitalists in the colony, as witnessed by the new large breweries established in the 1820s by leading businessmen such as Terry, Cooper and Dickson.

There were also a number of other drinks competing against colonial beer. The most obvious was imported beer, although this was really only a substitute for the highest quality local beers. Locally made peach cider, which was cheap and widely available from about 1803, was an alternative drink at the lower end of the market, although it had faded from the scene somewhat by the end of the 1810s, probably due to the success of the big brewers in producing cheap colonial beer. This was the only significant locally made alternative to beer. King had requested apple and pear trees suitable for making apple cider and perry in 1803, but these two traditional English drinks were little made in the colony.⁵⁵⁸ Wine production was negligible. Competition from legal distillers did not begin until the 1820s while illicit distilling, as discussed briefly in Chapter 1, was probably not as significant an activity as some historians have suggested.

The other alternatives to local beer were imported wine and spirits. To most modern Australians, port, madeira and sherry may not sound like substitutes for a glass of cold beer, but it is worth recalling that early nineteenth British society had 'heavier' tastes. And not all of the wine imported was fortified. Among the table wines was 'St Julien's Claret, a most delightful Wine for the hot weather'.⁵⁵⁹ As a generalisation, however, wine, like porter, was a drink for the reasonably well off. Imported spirits of all descriptions were the biggest single source of alcohol and the main competition for the colonial brewers. Rum

⁵⁵⁸King to Hobart, 9 May 1803, HRA IV, p. 240.

⁵⁵⁹SG, 22 November 1822.

drinking has been strongly identified with the desperate or degenerate drinker in the history of early Australia but it was usually drunk with water and often with the addition of sugar, molasses, lime juice or cordial. Joseph Holt describes a typical social gathering in the colony, where 'The rum bottle came to table, and tumblers and spring water'.⁵⁶⁰ Lime juice and cordial were common imports, as was shrub, a prepared base, usually of rum and lime cordial, although occasionally made with other fruits including raspberry. Shrubs were also made in the colony. When the editor of the *Gazette* spoke of a man 'quenching his thirst in one of our scorching hot months' with spirits, he probably had in mind a long drink, not a nip.⁵⁶¹ As well as being refreshing, spirits served to make water potable. In the late 1810s, D'Arcy Wentworth thought that spirits were largely drunk by the better off, while local beer was generally drunk by 'the lower orders who cannot afford to buy Spirits'.⁵⁶² This was a very broad generalisation, but even to the extent that it was true, the availability of spirits certainly provided a potential alternative for local-beer drinkers which brewers could not ignore in their pricing decisions.

Finally, not all of the substitutes for beer were alcoholic. Tea consumption was probably higher in New South Wales than in Britain in 1820.⁵⁶³ James Atkinson echoed Cobbett when he wrote that those 'who have been bred to agricultural pursuits in England, know that tea and sugar are but sorry substitutes for good wholesome beer'.⁵⁶⁴ But Atkinson was out of step with the times. Tea had already become a popular drink for the working man, as for many others.

⁵⁶⁰Holt, *Story*, p. 51.

⁵⁶¹SG, 19 June 1822.

⁵⁶²Wentworth to Bigge, 19 November 1819, in Ritchie, *Oral Evidence*, p. 53.

⁵⁶³Colonial tea imports average 6 lbs per head per year in 1828-9, and 9.8 lbs in the 1830s, compared with British consumption in the 1830s of 1.5 lbs (Dingle, 'Magnificent thirst', pp. 243, 247).

⁵⁶⁴James Aitkinson, *On the Expediency and Necessity of Encouraging Distilling and Brewing from Grain in New South Wales*, Printed by R. Mansfield for the Executors of the late R. Howe, Sydney, 1829, p. 18.

A Microcosm of Modernity

Brewing in early colonial Australia was small and primitive compared to parts of the industry in contemporary Britain, and to the industry in general in modern Australia. But these obvious differences are less striking than the similarities with the industry now and as it was developing in Britain at the time. A few large, specialised, common brewers in the capital accounted for the larger part of production. Smaller common brewers in Sydney and the regional centres, brewing victuallers and home brewers were already minor players in the market for beer. The extent of concentration was far greater than in contemporary Britain simply because there never were many home brewers, brewing victuallers or purely local common brewers, and the spread of settlement around Sydney was still constrained to the County of Cumberland so that much of the population was in a single market. From the 1830s, as settlement spread further, transport costs would provide protection to the country brewers of New South Wales, which would then be removed with the spread of the railways. The country brewers would fall to the larger and technologically superior Sydney brewers. All of this lay ahead, in the 1870s through to the 1920s.⁵⁶⁵ A similar transformation would occur in the other Australian states. It has seemed to historians of Australian brewing that this was a novel experience, but the concentration of the industry in the hands of a few large brewers in the capital had happened once before, in microcosm, in Macquarie's New South Wales.

⁵⁶⁵David T. Merrett, 'Stability and Change in the Australian Brewing Industry, 1920-94', in R. G. Wilson and T. R. Gourvish (eds), *The Dynamics of the International Brewing Industry Since 1800*, Routledge, London, 1998, pp. 230-2.

Table 5.1: Full Licences and Beer Licences Issued in NSW, 1808-1828

Year	Full	£	Beer	£
1808	112	3	—	—
1809	101	3	—	—
1810	31	20	50	5
1811	60	20	46	5
1812	108	20	13	5
1813	75+11	20	15	5
1814	89+	20	17+	5
1815	92+2	20	17	5
1816	68+1	30	21	5
1817	66+3	30	10	5
1818	81+3	30	10	5
1819	64+1	30	12	5
1820	45+2	30	6	5
1821	78+1	30	31+1	5
1822	105	30	12+4	5
1823	138	30	23+2	5
1824	118+8	30	34	5
1825	137	25	38	5
1826	122e	25	+1	25
1827	161	25	—	—
1828	177	25	—	—

Note

Numbers after the plus sign are licences issued for less than 12 months.

Sources

Police Fund (later Colonial Fund, see Table 4.1) for most of 1811-28.

1808: Lieutenant-Colonel Foveaux to Viscount Castlereagh, 6 September 1808, HRA VI, p. 641.

1809: Declaration of Magistrates, 11 March 1820, ML, BT 21, p. 4032; SG, 26 February and 5 March 1809.

1810: 31 is the intended number announced in SG, 17 February 1810. This is the number reported as issued in ML, BT 21, p. 4032. D'Arcy Wentworth Papers, ML, D1 (CY 417) has 1 spirit licence issued in the fourth quarter of 1810, which has not been included as it is not clear whether it was in addition to the announced number.

1813: SG, 7 August 1813 has 86 licences issued. The Police Fund has 75 full year spirits licences and £95 worth of spirits licences for shorter periods. Hence 75+11.

1814: Further spirits and beer licences worth £193.5.0 were issued but their numbers have not been estimated.

1816: All of the beer licences were for six or nine months due to the temporary cessation of the issuing of beer licences (see text).

1824: Colonial Revenue Accounts 1822-24, Wentworth Family Papers, ML, MSS 3726X (CY 774) has accounts to 17 May. These are used for the full year licences and also identify 8 spirits licences issued for shorter periods. Total revenue from spirits and beer licences in these accounts is \$15,374. Total revenue from spirits and beer licences in the Colonial Fund account for 1824 is \$16,614.73. The difference suggests that about 20 six-month spirits licences were taken out, although some of the money might have come from beer licences. Estimates have not been included.

1825: Spirits licences were reduced to £25, see SG, 10 February 1825.

1826: Beer, wine and spirits licences worth £3058.18.1 were issued. At £25 each, this gives 122+1. From 1825, short term licences were not usually issued so the number has been rounded to 122. A short term beer licence of £4.6.8 was issued.

In 1826 the beer licence fee was set at £25, the same as the spirits licence which allowed a licensee to sell any liquor. There was no reason for holding a beer licence. See Public Houses Act, 20 February 1826, VII Geo. IV, No. 2 in *Copies of the Laws and Ordinances Passed by the Governor and Council of the Colony of New South Wales 1826*, House of Commons, Parliamentary Papers, 1828 (335), Vol. XXI, p. 341.

Chapter 6

The Practice of Brewing

At the heart of the business of brewing lies the practice of brewing. Beer is made from water, malted and unmalted grain (usually barley, but including wheat, maize and rice), hops, yeast, and, in some cases, cane sugar. The process of ale brewing is described in detail in Appendix 1. Very briefly, grain is malted and then ground to make grist. The grist is mixed with hot water in a mash tun, forming a sweet solution called wort. The wort is boiled with hops and perhaps cane sugar in a copper, and then cooled in a cistern. Yeast is pitched into the wort to commence fermentation, which takes around a week. The beer is then conditioned for a few days to over a year. At every stage, the brewer must exercise judgement and skill. Brewing is a complicated productive process and an art.

For Commissioner Bigge, brewing in New South Wales in 1820 was a successful business which could be more successful still if the practice of brewing could be improved.

Hops have been grown in both colonies, but more extensively in New South Wales than Van Diemen's Land, and the consumption of the beer brewed at Sydney from maize and sugar by several individuals is already considerable, and would be increased if the materials were of a better quality.⁵⁶⁶

Consumption was already considerable and was constrained not by the limited quantity of inputs, but by their quality. In the preceding paragraph of his report, Bigge makes it clear that by better quality ingredients, he means the use of barley

⁵⁶⁶John Thomas Bigge, *Report of the Commissioner of Inquiry on the State of Agriculture and Trade in the Colony of New South Wales* [House of Commons, 13 March 1823, p. 33] *Australiana Facsimile Editions*, No. 70, Library Board of South Australia, Adelaide, 1966.

instead of the maize and sugar which were the basic and distinctive elements of colonial brewing.

Colonial beer was often, and understandably, criticised for its poor quality. But it is another matter to criticise brewers for their practices or to assume that the industry had been seriously retarded by the common and characteristic practice of brewing with maize and sugar. The difficulties in growing, malting and brewing with barley were longstanding and had most certainly not been resolved by 1821. Using maize instead of barley had been a part of colonial brewing at least since Boston & Co.'s precocious efforts in the mid-1790s, and sugar was a commonly used adjunct in beer made from maize and other grains. Maize and sugar were the basis for the considerable development in the industry which had been commented upon by a succession of writers, from Collins, through Mann and Bligh, to Wentworth and Bigge. Against the best standards of contemporary and modern brewing practice, colonial beer was no doubt of poor quality. But the colonial style overcame some serious technical problems in production, and so allowed relatively large scale production of cheap beer. It was an enormous compromise, which some brewers themselves resisted, but it worked.

Further, consumption may not have been that much higher if local brewers had produced all-barley-malt, British-style ale and porter. The colonial style undoubtedly lost local brewers some custom. The level of imports is a minimum indication of the extent of this lost trade. But in the late 1820s and early 1830s, critics expressed their concern that many members of the public, especially the native born, preferred the taste of colonial ale. At the very least, for many drinkers, the taste of colonial beer was not something they glumly accepted as the price of cheaper beer. It is even possible that some consumers who drank colonial ale would not have drunk British-style beer, regardless of the price. Sometimes, there is no accounting for taste.

Water

Brewing uses a lot of water, for washing and steeping the grain, mashing the malt, and cleaning equipment (cleanliness being a constant concern of the brewer). The availability of water, however, was not a serious problem for the early brewers.

While much of Australia is very dry, Sydney has a temperate climate, characterised by good winter rains and a dry summer. All of the main settlements were on permanent running water: the Hawkesbury and Parramatta rivers and the Tank Stream in Sydney, although pollution of the last of these was a cause for concern within ten years of the first landing. Nearby residents dumped refuse into the spring and kept pigsties close to the stream. Governor Hunter had the spring fenced and tanks constructed from which people were to draw their water.

Complaints continued, as some residents knocked down parts of the fence in order to dump their refuse and let their pigs wallow. A particular problem was the taking of water from above the tanks which disturbed the stream and muddied the water that flowed into the tanks.⁵⁶⁷ These problems may have caused some difficulty for Boston & Co., whose brewery was nearby, although it also had access to a spring which flowed into the tanks. Pollution was not a problem at Parramatta and Windsor. According to Jervis, the government brewery was located on the north east corner of George and O'Connell streets.⁵⁶⁸ This would place it about 100 metres from the Parramatta River, at a point above the tidal section of the river, although the water might at times have been brackish. Thompson's Windsor brewery was on the South Creek, which flowed into the Hawkesbury, and from which the water for brewing was drawn.⁵⁶⁹

⁵⁶⁷Orders dated 22 October 1795, 26 January 1796, 2 May 1797, 20 December 1798 and 25 January 1799, HRA I, pp. 680, 687; HRA II, pp. 78-9, 361-3. This was still a problem in 1802; in 1803 the tanks had become clogged with sand and had to be cleared (HRNSW V, p. 212).

⁵⁶⁸Jervis, *Cradle City*, p. 104.

⁵⁶⁹J. V. Byrnes, 'Andrew Thompson 1773-1810', *Journal and Proceedings of the Royal Australian Historical Society*, vol. 48, 1962, part 2, p. 114.

However, the chief source of water for the major brewers was from underground. Most of the breweries in Sydney operating in the early nineteenth century are known to have had wells, as did Squire's at Ryde. Squire's wells were 'very large and deep... cut out of the solid rock' and could still be seen in 1914.⁵⁷⁰ The location of wells determined the precise location of a brewery. Sellers of property would note the presence of a well as a particular advantage for a prospective brewer.⁵⁷¹ But, as discussed in Chapter 5, the concentration of the major breweries in Sydney-Ryde was largely determined by the advantage of being in the largest market.

Water was an essential requirement for brewing, but it does not seem to have had any other significance. In particular, there was no concentration of breweries at a spot noted for the quality of its water, as at Burton upon Trent in England. That there was water was enough, and the attentions of brewers were directed to the more pressing problems of securing grain and hops and coping with the difficult conditions for malting and brewing. The little we know about the quality of the water suggests that the brewers were happy with its quality. 'A Philanthropist', in his article in the *Gazette* about brewing in 1808, argued that 'the art of brewing is very little affected by the difference of water, if it be but soft, with which we are here very happily supplied'.⁵⁷² Hard water, with plenty of mineral salts, is best for pale ale brewing, which explains the development of this style at Burton upon Trent. Soft water is best for stout, porter and mild. London's water, drawn from wells, not the Thames, was very soft, with a high chlorine content. This accentuates the sweetness of the malt in mild beer in particular.⁵⁷³ That 'A Philanthropist' was happy with the water is one of many hints as to the style of early colonial beer.

⁵⁷⁰Hibble, 'Ryde', p. 287.

⁵⁷¹SG, 8 December 1805.

⁵⁷²SG, 9 October 1808.

⁵⁷³Protz, *Beer*, pp. 14-5.

Commissioner Bigge made a general comment on the bad quality of the water in New South Wales, which, with the abundance and cheapness of fruit, produced dysentery.⁵⁷⁴ It is hard to know what to make of his claim about the water or the fruit, except that if there were concerns about the safety of the water, this was a boon to the brewer by increasing the demand for beer. Brewing was long recognised as a way of making unsafe water potable. The addition of spirits to water, and brewing tea, were similarly defensible on grounds of health as well as taste.

Hops

By the late eighteenth century, hops had long been a basic ingredient of British beer. The increasing consumption of hopped beer, in contrast to the traditional unhopped ale, met with considerable resistance in sixteenth century Britain from ale brewers and some drinkers. Extravagant claims were made about the hop's detrimental effects on the health of the drinker, nationalists railed at this foreign adulterant, and there was even a religious dimension to the opposition summed up in the well known, if chronologically inaccurate, couplet:

Heresie and beere came hopping into
England both in a yeere.⁵⁷⁵

But neither those who declared for good British ale made only from water, malt and yeast, nor those who persevered with other additives, such as cloves, cinnamon, coriander and bog myrtle, stood a chance. Most brewers and drinkers fell in love with the hop for its superior qualities as a preservative and its

⁵⁷⁴Bigge [13 March 1823, p. 81].

⁵⁷⁵This version was recorded in 1599. In 1852, it was rendered 'Hops, reformation, baize and beer/Came into England all in a year'. Protestantism was no longer heresy. For both versions, see Arnold Silcock, *Verse and Worse*, Faber and Faber, London, 1974, p. 18. For the opposition to the hop, see Protz, *Beer*, pp. 207-8.

agreeable bitterness and aroma. By the time of British settlement in Australia, British beers were heavily hopped by modern standards, both as a matter of taste and because the preservative qualities of hops were so much more important in an age without refrigeration, advanced hygiene or a scientific understanding of the brewing process.

In Australia, occasional use was made of alternative, or at least additional, additives, even when hops were quite freely available. Coriander seed was in a cargo of other brewers's requirements – hops and isinglass – which arrived in 1835.⁵⁷⁶ But the use of succedanea for hops in the colony was largely a matter of necessity rather than choice. Local brewers tried native and exotic plants as substitutes. Some of the latter were deliberately brought to Australia for use in brewing. In 1796, a partner in Boston & Co., the Reverend Palmer, thanked his correspondent in England, the Reverend Lindsey, for his 'gift of the substitute for Hops'.⁵⁷⁷ According to Governor King, English Broom was growing 'luxuriantly' by 1803, having been raised from seed brought in 1801.⁵⁷⁸ King had been responsible for the plant's introduction. In a list of seed he prepared in 1798 for despatch to the colony is 'The best kind of Broom Seed as a substitute for Hops'.⁵⁷⁹ Whether anyone used it for this purpose is not known. Hibble suggests that horehound from the government store was used by Squire in his early brews, although we know now that Squire used hops.⁵⁸⁰ Horehound was a popular brewed drink, like ginger beer.

Among native plants, later writers have suggested a number of possible substitutes. Lavett says the native or wild hop was used.⁵⁸¹ This is *Dodonaea viscosa purpurea*, known today as the purple hop bush. Native sarsaparilla

⁵⁷⁶*The Sydney Monitor*, 3 June 1835.

⁵⁷⁷Thomas Fyshe Palmer Papers, ML, pp. 11-12. See Chapter 2.

⁵⁷⁸King to Hobart, 9 May 1803, HRA IV, p. 238.

⁵⁷⁹King to Banks, 17 October 1798, HRNSW III, p. 498.

⁵⁸⁰Hibble, 'Ryde', p. 285.

⁵⁸¹J. K. Lavett, *The Kissing Point Squires: Pages from the History of a Nation. The Story of James Squire and Frederick Garling*, Adelaide, 1965, NLA, MS 1251, p. 26, citing J. H. Maiden, *Useful Native Plants* [1889].

(*Hardenbergia*), a vigorous climber in pink and white varieties, was used to make tea, hence its name among the colonists: sweet tea plant. The adjective was used ironically, for its leaves are quite bitter and may therefore have found an additional use among the colony's earliest brewers.⁵⁸² When Rushton arrived from Tasmania in 1804, to take up his duties at the government brewery, he brought with him a native root which it was hoped would provide a readily available substitute for hops.⁵⁸³ Governor King sent a sample to the botanist, Joseph Banks, who was singularly unimpressed.

The root you send me, and propose as a substitute for hops, does not taste bitter, or very little so. It has a bad taste, which I think would spoil the beer. Your hops will be two years old when this comes to hand, and will have borne some fruit this season; next they will give you a good crop. I would advise you, therefore, to wait with patience, and not search for substitutes which, if of ever so promising a nature, might have evil effects on the human constitution.⁵⁸⁴

Imports

Banks's advice that there was no substitute for hops was correct, but his optimism about the success of the cultivation of the hop was somewhat premature. The other way to get hops was to import them from England, where the hop industry was long established and highly organised. As discussed in Chapter 2, hops were brought to Sydney in 1793 and put to use by James Squire. But such fortuitous arrivals could not be the basis of an industry. Larger and more regular shipments

⁵⁸²The native sarsaparilla's bitterness is described by botanist James Smith in his appendix to John White's *Journal of a Voyage to New South Wales* [1790] Angus and Robertson, Sydney 1962, p. 175. In New Zealand, the manuka, known also as the tea plant, was used by James Cook's crew in making spruce beer in 1769-70 and by Vancouver's crew in 1791 (Vancouver, *Voyage*, vol. I, p. 364 and fn. 3).

⁵⁸³See Chapter 3.

⁵⁸⁴Banks to King, 29 August 1804, HRNSW V, p. 458.

would be needed as the colony grew. Hops are not the best travellers, especially in the conditions of a lengthy voyage to Australia two hundred years ago. Care was required to prevent spoilage from moisture, and, even with care, hops arriving in the colony were often old and had lost some potency. Nevertheless, the hop trade developed during the early decades of settlement and was very well-established by the end of the 1810s.

The shipping records are not helpful in quantifying the importation of hops, which, unlike alcohol, was not a matter of official concern or control. Dry cargoes like hops could be in any of the numerous chests and barrels of sundry items listed in the shipping records. Only a few cargoes are officially recorded before 1820: 1 pocket in 1804, 4 pockets in 1810, 6 pockets in 1816.⁵⁸⁵ And yet other cargoes of some size were clearly coming into the colony. Rushton, in announcing operations at his Brickfields brewery, informed the public that as he had 'purchased all the hops imported in the Fox Brig [*sic*], and contracted for a continual supply, he will be enabled to continue the brewery without interruption, and to comply with all orders with which his numerous friends may favour him'.⁵⁸⁶ This was in 1808, when shipping records were limited to spirits and wine imports by the rebel administration. But even when legal government recommenced, imports of hops went unrecorded by officials. In 1815, Messrs Riley and Jones advertised six pockets of Kentish hops for sale from the *Hebe*.⁵⁸⁷ These two examples from 1808 and 1815 not only show the shortcomings of the official record of hop imports but illustrate the three ways in which the hop trade was conducted. Rushton snapped up a speculative cargo when he got the chance, but then put in place a regular arrangement to receive future supplies. Riley and Jones were merchants who stocked hops among the other goods they carried.

⁵⁸⁵HRA V, p. 121; HRA VII, p. 321; Naval Officer Quarterly Reports, 1810-24, AONSW, Col. Sec. x698-x701 (6023).

⁵⁸⁶SG, 19 June 1808.

⁵⁸⁷SG, 28 August 1815.

The known individual consignments of hops became larger during the 1800s and 1810s, providing a good indication of the increasing scale of colonial brewing. A single speculative cargo of four tons (8,960 lbs) arrived on the *Surry* in 1819, and was snapped up by Squire.⁵⁸⁸ In 1820, three cargoes of 90 pockets, 20 pockets and 4 bags are recorded, totalling 19,600 pounds. These were followed by known cargoes of 6 pockets, 45 pockets, 33 bags and 10 pockets in 1821, totalling 19,488 lbs.⁵⁸⁹ At three pounds to a hogshead of ale, these consignments in 1820 and 1821 were sufficient to allow for 312,704 gallons per annum.

Some historians have regarded the use of imported hops as a sign of underdevelopment in the brewing industry. Broeze, in listing the features which he believed showed brewing 'was very much in its infancy', included the fact that 'hops were still imported from Britain'.⁵⁹⁰ This is a curious view. An industry is not underdeveloped because it imports much of its raw materials. The Belgian chocolate industry relies on imported cocoa. Post-war Japanese steelmaking was established with coal and iron ore from Australia and elsewhere. The Danish brewing industry, led by international giant, Carlsberg, developed with imported hops, chiefly from Germany and Bohemia.⁵⁹¹ In early Australia, the establishment of permanent, large-scale commercial breweries relied largely on imported hops. The development of the hop trade was itself an achievement, reflecting improved shipping and trading arrangements.

Of course, English hops were more expensive in Australia than in Britain. Hops were compressed during bagging and took up relatively little space on board ship. A pocket, sufficient for 50 to 60 hogsheads of beer, occupies about 36 cubic feet (2 by 3 by 6 feet). Nevertheless, freight, agency and handling costs added considerably to the price of English hops landed in Australia. In 1818, the biggest

⁵⁸⁸Ritchie, *Oral Evidence*, p. 117.

⁵⁸⁹Manifest of the *Caroline*, January 1821, ML, BT 25, p. 5578 (CY1299);

⁵⁹⁰Frank Broeze, 'Consumer Goods', p. 169.

⁵⁹¹Per Boje and Hans Chr. Johansen, 'The Danish Brewing Industry After 1880', in R. G. Wilson and T. R. Gourvish (eds), *The Dynamics of the International Brewing Industry Since 1800*, Routledge, London, 1998, p. 69.

brewery in Britain, Barclay Perkins, valued its hops at about $1/3$ a pound.⁵⁹² In Sydney in 1819, Squire paid $3/9$ a pound for the four tons of hops from the *Surry*. These hops arrived in March or April 1819 and were presumably from the September 1818 harvest in Britain. Squire therefore paid $11/3$ for three pounds of hops, sufficient for a hogshead of ale, while Barclay Perkins paid $3/9$, a difference of $7/6$, which is reasonably significant against a wholesale price for best beer of £4.16.0 (or 2s a gallon). This difference in prices may be overstated. Smaller brewers in Britain probably paid more per pound, and hop prices fluctuated considerably. In 1817, the worst hop harvest in decades, Barclay Perkins's valuation had been about $3/6$ a pound. And the figures for Barclay Perkins are an average valuation of stock over the year, not actual prices paid, which in 1817 reached $6/4$ per pound for some brewers. Even so, colonial brewers were paying considerably more for hops than English brewers. But this was an influence on the cost structure of brewers, not a fundamental obstacle to brewing or a sign of retarded development of the brewing industry.

A reliance on imported hops did not mean that colonial brewers were using hops of vastly inferior quality. The distance and conditions of a sea voyage from England to Australia would certainly have affected the freshness and potency of the hops carried. But it should be realised that the hop is a fickle crop, and it was conventional practice for British brewers to have hops in store. What was lost in quality was justified by reducing the effects on margins from the considerable price rises that followed a poor hop harvest.⁵⁹³ Brewers in Britain were often using last year's hops. Relative prices for local and imported hops are probably the best indication of the difference in quality. While the *Hobart Town Courier* reported one pound of colonial hops to be equal to three of imported, *The Colonial Times* in Hobart reported English hops at $2/6$ per pound and local hops at

⁵⁹²Mathias, *Brewing Industry*, pp. 480-1, 550.

⁵⁹³Mathias, *Brewing Industry*, pp. 523-33.

3/-.⁵⁹⁴ This difference in price is broadly in line with prices in New South Wales in 1819, where local hops sold for 4/- per pound, compared with imported hops at 3/9.⁵⁹⁵ A larger local hop industry, which could have provided a larger amount of higher quality hops at roughly the same price as imported hops, would have been of benefit to colonial brewers. But the significance of a local hop industry to the development of the local brewing industry should not be overstated.

Local Production

While imports were the basis of hop supply in early Australia, the establishment of hop growing on any scale at all was still a major achievement. Compared to other crops, hops involved a considerable investment in money and time, and a high degree of risk. To begin with, the growers needed hop cuttings (or 'sets') or hop seed, and in early Australia these were hard things to acquire and raise. Capital costs were high. The hop is a climbing perennial which grows on wires suspended between poles. Once picked, hops must be dried in a kiln. Labour costs were also high. Hop plants should be well manured and require close cultivation. Picking and bagging were costly exercises. A typical small hop garden of two acres in England employed twenty-four to thirty-two women with their children during picking, two or three foremen at the bins, a kiln-man and a 'bagger', whose unpleasant duty it was to stand in the hop bag while hops were dumped over his head, packing the flowers down with his feet. Permanent labour during the year was one man to four acres. In all, cultivation expenses for an acre of hop plants were six or seven times that of an acre under grain.⁵⁹⁶ Similar arrangements were in place in the colony.⁵⁹⁷ The plant takes time to establish. A full crop is

⁵⁹⁴*Hobart Town Courier*, 28 March 1829, quoted in Pearce, *Hop Industry*, p. 27; *The Colonial Times*, 16 January 1829, quoted in SG, 12 February 1829. A partial explanation for the difference may be a matter of timing. The *Courier* was writing at the time of the local hop harvest.

⁵⁹⁵Ritchie, *Oral Evidence*, p. 117.

⁵⁹⁶Mathias, *Brewing Industry*, p. 488.

⁵⁹⁷The gathering of Rushton's crop in 1813 'was performed by a number of bonny lasses who

yielded after three years. And it was a risky business. While yields from healthy plants were prolific, the hop was a notoriously delicate flower which was highly susceptible to climatic changes and proved particularly defenceless against attack by diseases and pests. Growing hops was the most uncertain of agricultural pursuits and was known in England as the gambler's crop.⁵⁹⁸ But of course, it was attractive in greater measure: the demand for hops derives from the demand for beer and this in early Australia was strong.

The time and expense involved in establishing a hop plantation was acknowledged by George Howe, the editor of *The Sydney Gazette*, who reported the progress of Squire, Rushton and other colonial growers, ran lengthy articles and occasional tips on hop cultivation, and even extracted inspirational snippets from the London papers, such as the report on a hop plant at Lewes which had grown an inch and a half in six hours.⁵⁹⁹ The beginning of hop growing roughly coincided with the establishment of the *Gazette* in 1803. In a decade, hop growing was a successful if still minor agricultural pursuit. Howe praised those 'few persons' whose perseverance had brought on a valuable plant which 'had been condemned as immaturable' in the colony.⁶⁰⁰

The first problem to be overcome was getting the hop into the colony. Hop plants may be propagated from seed, although this is difficult. The usual method is to take cuttings when dressing the root stock in spring, before the growing season begins. Cuttings are therefore usually taken in March in England and in September in Australia. There are problems in transplanting hops from England, with a growing season from April to September, to Australia, where the growing season is from October to March. Both seed and cuttings were sent to Australia, as well as established plants in specially constructed plant boxes.

volunteered their services, and performed their chearing task with smiles that gave to the countenance a sweetness of expression, not otherwise to be depicted than as the liveliest contrast nature has afforded, to the little bitter flower of which they were dismantling the vines' (SG, 15 May 1813).

⁵⁹⁸Pearce, *Hop Industry*, pp. 3-4; see also Mathias, *Brewing Industry*, p. 477.

⁵⁹⁹SG, 20 April 1806.

⁶⁰⁰SG, 15 May 1813.

Joseph Banks was the driving force behind the first attempt to send hop plants to New South Wales. In 1798, he persuaded the British government to fit the *Porpoise* with a plant cabin, provided a range of plants to be sent and arranged for a gardener, George Suttor, to tend them on the voyage.

I have consulted Col. Paterson about the European plants and fruit-trees that have been already introduc'd into the colony, and I find many of great importance still wanting, particularly the hop, which by enabling the colonists to brew beer, will diminish the consumption of unwholesome spirits, and add materially to the health and comfort of the inhabitants.⁶⁰¹

A large volume of correspondence followed between Banks and others about preparations for the voyage, including the design of the plant cabin and the plants to be taken.⁶⁰² The future Governor, Philip Gidley King, was a party to these plans as the *Porpoise* was to convey him to New South Wales. Plants began being received in October 1798. Delays saw the ship still in harbour in January 1799, and some plants were already lost and had to be replaced.⁶⁰³ The ship was found to be 'so very crank[y] as to be scarce seaworthy', owing to the weight of the plant cabin, which made her top heavy.⁶⁰⁴ The storage of the plants had to be redone. In April, everything in the garden was still thriving, although the ship still had not sailed.⁶⁰⁵ The hops and other plants were still alive in May, and in August when she finally sailed.⁶⁰⁶ She returned to port disabled in September and was condemned in October. In September, the garden was still in 'most excellent

⁶⁰¹Banks to Under Secretary King, 15 May 1798, HRA II, p. 231 (or HRNSW III, p. 382). A copy of this letter was included in Portland's letter to Hunter of 18 September 1798.

⁶⁰²See HRNSW III, pp. 407, 410-12, 480-1, 485, 496-500, 507-8, 510-11, 514-5, 527, 532-5, 536-44, 644-7, 656, 658, 672, 675-6, 679-81, 705, 709, 718-24, 738-9, 748.

⁶⁰³Banks to Dr W. Roxburgh, 7 January 1799, HRNSW III, p. 527.

⁶⁰⁴The Navy Board to Banks, 9 February 1799, HRNSW III, p. 536.

⁶⁰⁵King to Banks, 22 April 1799, HRNSW III, p. 656.

⁶⁰⁶Suttor to Banks, 16 May 1799, HRNSW III, p. 672; King to Banks, 22 August 1799, HRNSW III, p. 705; Suttor to Banks 25 August 1799, p. 709: 'The hops have the same healthy appearance'.

order' and although the 'hops were cut down', they were still 'in a healthy state'.⁶⁰⁷ A Spanish prize, the *Infanta Amelia*, was purchased and renamed the *Porpoise*. The crew and stores were transferred, and the new *Porpoise* sailed in March 1800, finally arriving in November of that year.⁶⁰⁸ King meanwhile had transferred to the whaler *Speedy*, arriving in New South Wales in April 1800.

In a letter to his patron, Suttor related the difficulties of keeping the plants alive in a garden on board a small ship on a long voyage. The hops and other valuable plants were lost. 'As they have hops at the Cape, I have great hopes we shall soon receive some from thence. Mr Barrow assured me that we might depend upon their being sent.'⁶⁰⁹ This was not to be. In August 1801, King lamented:

What a happy thing it would have been for this colony if the exertions made by you to give us the hop had not failed by the misfortunes and detention of the old *Porpoise*... Will you, sir, be tempted to make another trial to send the hop? If you do, for God's sake do not trust the surveyor of timber and bolts with the secret. The sublimity of his art has not only prevented us from being thinking about beer, but has also made a poor – very poor – man.⁶¹⁰

Four days later, King continued the theme.

I hope the misfortunes of the *Porpoise* will not prevent you from making one more trial about the hops. I think it might be accomplished by the whalers. If the *Albion*, or the person who commands her, comes out again I

⁶⁰⁷King to Banks, 17 September 1799, HRNSW III, p. 718; Suttor to Banks, 8 November 1799, HRNSW III, p. 739.

⁶⁰⁸HRA III, pp. 85 and fn on p. 764.

⁶⁰⁹Suttor to Banks, 28 December 1800, HRNSW IV, p. 277; see also King to Banks 20 November 1800, HRNSW IV, p. 257.

⁶¹⁰King to Banks, 21 August 1801, HRNSW IV, p. 360.

am sure he will take every care of them. Do not you think by putting them in small boxes – in a covered box like that the waratahs go hence in – that it would do? I think it might.⁶¹¹

Despite the failure of this ambitious scheme, the hop was introduced to the colony about this time. Some seed was brought by an officer who arrived at the end of 1802 on an Indian vessel. By May 1803, ‘about forty very thriving hop-plants’ had been raised from some of this seed, ten of which were still ‘growing very luxuriantly’ in September. In March 1804, there were again ‘about forty thriving hop plants growing’ from the seed brought in 1802.⁶¹² Pearce argues that the first forty seedlings probably died because they were planted at the wrong time of the year and that the plants growing in 1804 were from a second planting of some of the seed in the more favourable months of August and September.⁶¹³

The next problem was to propagate the hop. Among those who had early successes were William Paterson and Samuel Marsden, both of whom may have been working with the seed from India or with other material. Paterson served at various times as Administrator and Lieutenant-Governor of the colony. He was also a keen botanist, a member of the Royal Society and a correspondent with Banks. As well as sending plant specimens to England he introduced several into Australia, including a successful peach tree. He had cultivated a fine garden in Sydney prior to leaving the colony for the first time in 1796. Following his return in November 1799, he applied himself to experimental farming on a larger scale.⁶¹⁴ On 15 October 1804, Paterson left for Van Diemen’s Land to establish the new settlement at Port Dalrymple. He was therefore absent when one of his

⁶¹¹King to Banks, 25 August 1801, HRNSW IV, p. 514.

⁶¹²King to Hobart, 9 May 1803, HRA IV, p. 79; King to Banks, 9 May 1803, HRNSW V, p. 137; King to Hobart, 17 September 1803, HRA IV, p. 392; King to Hobart, 1 March 1804, HRA IV, p. 460.

⁶¹³*Hop Industry*, p. 10 and fn. 10. She relies on the private advice of A. S. Nash, a hop research officer for Carlton and United Breweries.

⁶¹⁴David MacMillan, ‘Paterson, William’, ADB, vol. 2, pp. 317-9.

horticultural achievements was announced to the public. 'With pleasure we communicate, we believe, the first successful experiment that has been made in cultivating the Hop; a few vines in the garden of His Honor Lieutenant Governor PATERSON at present having a very promising appearance.'⁶¹⁵ Paterson had taken some cuttings to Port Dalrymple which survived the journey.⁶¹⁶

The Reverend Samuel Marsden reported his hop plants were growing well, with vines over two feet long, in a letter dated 27 April 1803.⁶¹⁷ Banks wrote to Sullivan on 18 November 1803 that there was no need to send hops as Marsden was growing them, there being two sorts of hop plants in the colony raised from seed.⁶¹⁸ This may have been an overstatement of Marsden's success. An earlier report of the success of, presumably, Marsden, had been overly enthusiastic. 'I see by the papers of October last that hops are so plentiful in the Colony that one of the Clergymen has great plantations of them, & that the finest Porter is made here.' These are, King regrets, 'glaring untruths... nothing like the English Hops exist in this Colony'.⁶¹⁹

The father of the brewing industry, however, was also the father of the hop industry. James Squire had been experimenting with hops since about 1802, possibly with seed which had arrived before the better documented cargo brought by the anonymous officer.⁶²⁰ The record of Squire's endeavours over the next twenty years shows the effort required to grow the hop in New South Wales.

Squire had his first small success in 1805.

⁶¹⁵SG, 23 December 1804.

⁶¹⁶Paterson to King, 26 November 1804, HRNSW V, p. 487. For the hop in early Tasmania, see Chapter 4.

⁶¹⁷Mackaness, *Correspondence of Marsden*, p. 31.

⁶¹⁸Quoted in J. K. Lavett, *The Kissing Point Squires: Pages from the History of a Nation. The Story of James Squire and Frederick Garling*, Adelaide, 1965, NLA, MS 1251, p. 27.

⁶¹⁹P. G. King to Joseph Banks, 21 August 1801, ML, Banks Papers vol. 7, King 1788-1805, A78-6, p. 132 (FM/1748). The letter was begun in April and completed in August. The section dealing with hops is at the end of the letter.

⁶²⁰SG, 21 March 1812. The SG of 15 May 1813 says that Squire had unremittingly applied himself to the cultivation of the hop for 15 or 16 years, which seems an exaggeration.

A report was made to HIS EXCELLENCY last Monday on the progress of the hop, at Kissing Point, by J. Squires, who produced an excellent specimen, consisting of several very fine bunches: he has now about 200 plants polled, most of which are well in blossom, and he supposes will be fit for gathering in another fortnight.⁶²¹

The same issue of the *Gazette* carried a second commentary on this small start.

The degree of promise which the hop has attained at length even in the instance of a single small plantation (at Kissing Point) must prove an acceptable article of information to the friends of culture who have hitherto contributed their labours to promote its growth: but as few objects are beyond the reach of determined perseverance, a few years more may probably bring this excellent plant into general growth throughout the colony.

The next year, Squire, identified as a 'settler and brewer at Kissing Point',

waited on His Excellency at Government House, with 2 vines of hops taken from his own grounds. On a vine from a last year's cutting were numbers of very fine branches; and upon a two years old cutting the clusters, mostly ripe, were innumerable, in weight supposed to yield at least a pound and a half, and of a most exquisite flavour.

King gave Squire a cow for his 'unremitted attention... in bringing this valuable plant to such a high degree of perfection'. Squire was not alone, other colonists

⁶²¹SG, 13 January 1805.

having 'applied themselves with laudable and unremitting perseverance' in the cultivation of the hop.⁶²²

Squire's slowly but surely expanding acreage under hop plants supplied hops to his brewery at Kissing Point and allowed for a number of cuttings which he made available to other growers. Until his success in 1806, Squire relied solely on imported hops. The week following Squire's triumph, the *Gazette* reported that Squire 'has made actual experiment of his hops in brewing and that their excellence very far exceeds his most flattering expectation, their flavor and quality being in no single degree inferior to the best imported samples'.⁶²³

On 26 July 1807 the *Gazette* reported that Squire had planted two and a half acres in hops in 1806, of which only a small part was productive. The yield of this planting had been 110 lbs 'of good hops'. While the *Gazette* thought this 'a sufficient earnest of the benefit which we are to hope from his exertions in this praiseworthy object', Squire would no doubt have preferred a better success rate. He nevertheless persevered, and also encouraged others to enter into hop production. In the same *Gazette*, he advertised 'that he has now 12 to 1500 *Plants* to spare, the whole in a healthy state, and to be disposed of at the rate of 6d each'. He reminded potential buyers 'that the present is the proper season for planting'.

Squire's success did not register with Governor Bligh, who reported that 'Brewing is carried on principally with maize, and the beer generally drank; but hops do not at present grow well, and no good succedaneum is yet discovered to answer their use, from which cause the beer will not keep'.⁶²⁴ His view was supported by Surgeon Luttrell. 'Beer cannot be made good here from the want of hops, and the climate is much too warm for their growth; attempts have been made to raise them, but without succeeding.'⁶²⁵ These generalisations are too broad. While much of the colonial beer at the time may have been underhopped,

⁶²²SG, 16 March 1806.

⁶²³SG, 23 March 1806.

⁶²⁴Bligh to Windham, 31 October 1807, HRA VI, p. 152.

⁶²⁵Letter to Under-Secretary Sullivan, 8 October 1807, HRNSW VI, p. 295.

hops were being imported, and Squire's first substantial yield would have allowed for the production of 2,000 gallons of well-hopped beer.

In 1808, Squire gathered 500 lbs from two acres, enough for about 9,000 gallons of beer. Encouraged by his success he planted four acres later in the year, 'which he poled about the middle of November'. The plants looked 'remarkably well, the weather being moist and favorable until the middle of last month [December], the perceptible growth of the vines being from 12 to 18 inches in the course of a day and night, and a ton of hops was expected'. But several hot days in December 'altered their appearance much, and the continued drought still more and more affected them, so that their present condition does not admit the expectation of even one-third of the former estimate'.⁶²⁶ The drought was a double blow for Squire as it ruined much of the early maize at Kissing Point as well.

Squire recovered from his setback. In 1810 he announced that 'Any Person desirous of entering into a Hop Speculation, may be Supplied with 1000 perfect Plants' at one shilling each.'⁶²⁷ By 1812 he was producing 1,500 lbs from five acres.⁶²⁸ The *Gazette* celebrated his achievement and recounted his story to date.

The exertions of Mr Squires in rearing the hop have been progressively successful for the last five years, the preceding five being wasted in experiments, which failed from a want of sufficient information in the treatment of this tender plant.— After a series of disappointments that much weakened the hope of eventual success, the animating season at length arrived to cheer him with the prospect of turning his labours to account. This was in 1806, when he produced a single vine, from the cuttings of which he has since extended his plantation.

⁶²⁶SG, 15 January 1809.

⁶²⁷SG, 29 September 1810.

⁶²⁸SG, 21 March 1812. This number of the *Gazette* gave the following yields from 1807 to 1812: 'a few pounds', 50, 250, 500, 750, 1500. These figures do not accord with earlier reports in the *Gazette*, and seem also to be too neat a progression.

Squire's yield in 1812 of three hundred pounds per acre was at the lower end of English experience. In England in 1730, yields per acre averaged 515 lbs and ranged from 231 lbs in Hereford to 897 lbs in Essex. By 1822 the average yield had risen to 726 lbs per acre.⁶²⁹ Nevertheless, the total yield was sufficient for 24,000 gallons of ale at a hopping rate of an ounce a gallon. Squire was clearly encouraged and continued his previous efforts to encourage others to cultivate the hop. In 1814 he informed those gentlemen who have made application for hop plants to collect them 'as he begins cutting his Maiden Plants on Monday'.⁶³⁰ By 1817, his hop plantation had been reduced to four acres, although it was still 'in excellent condition'.⁶³¹

Other growers were taking up the challenge with varying success. In 1805, Richard Palmer of Sydney was advertising 'A Quantity of Hop Plants now fit for transplanting. Purchasers will be accommodated with any number under three thousand'.⁶³² Early in 1806 the *Gazette* reported: 'We know of none whose endeavours to bring the hop to perfection this season have had a more flattering prospect than those of Richard Palmer on the Brickfield Hill'. But the produce of his small plantation 'was extremely slender' owing to the 'extreme poverty of the soil'. 'A few clusters of a tolerable flavour were gathered, and some still remain on the vines; from which it may be hoped that his perseverance in so laudable a pursuit may hereafter recompence his labours.'⁶³³ In early 1807, Palmer was advertising a good house with a spacious garden and orchard, on an acre of land.⁶³⁴ But he was still in the hop business in August 1807, when he advertised several hundred healthy hop plants for sale at 6d each, the same price as

⁶²⁹Mathias, *Brewing Industry*, p. 485.

⁶³⁰SG, 15 October 1814.

⁶³¹SG, 3 May 1817.

⁶³²SG, 9 June 1805. This notice has his address as No. 68 on the Brickfield Hill. Palmer's property is identified on James Meehan's Plan of the Town of Sydney, 31 October 1807 (HRA VI, p. 367). It was just south of Wilshire's tannery.

⁶³³SG, 19 January 1806.

⁶³⁴SG, 4 January 1807.

Squire's.⁶³⁵ Sometime after he appears to have gone out of the hop business, but he held a spirits licence in 1809 and was one of the 50 people who took out a beer licence in 1810.⁶³⁶

By early 1810, five and a half acres of land were reported under hops: 4.5 at Sydney and its vicinity, and 1 at Parramatta and its vicinity.⁶³⁷ The former was Squire's Kissing Point plantation. The grower at Parramatta is unknown. Shortly after, Thomas Rushton began supplying his new brewery in Sydney with his own hops from a farm at Blackwattle Swamp about a kilometre from Palmer's old hop field at the southern end of town. The yield in February 1812 was 110 lbs from two thirds of an acre planted in June 1811. He planted an acre and a half in June 1812 with cuttings from his first crop, which yielded 940 lbs in March 1813. This was more than double the yield per acre achieved by Squire in 1812 and was at the higher end of British yields at the time. At the same time, however, he was disappointed with a yield of only 140 lbs from four more acres planted with cuttings which he had purchased, quite possibly from Squire. The *Gazette* reported that:

Mr R. has no doubt that this failure proceeded from the badness of the cuttings, and not from any difference of soil, situation, or management: it is therefore his intention to rid them up, and plant for the ensuing crop cuttings from the most prolific vines.⁶³⁸

Rushton had relied exclusively on imported hops until the early 1810s. His yield in 1813 of 1,080 lbs was sufficient for 17,280 gallons at an ounce a gallon. By 1821 he was the largest producer of hops in the colony.⁶³⁹ But like the other

⁶³⁵SG, 2 August 1807. His advertisement carried a reminder that this was 'the most favorable season for planting'.

⁶³⁶SG, 26 February 1809; SG, 21 July 1810.

⁶³⁷Statement of Land in Cultivation, 1 to 22 February 1810, HRA VII, p. 282.

⁶³⁸SG, 15 May 1813.

⁶³⁹Fletcher, *Landed Enterprise*, p. 204, using the 1821 Land and Stock Return.

major producer – Squire – Rushton’s hop production was much less than half of his hop consumption.

In the mid-1810s, Squire and Rushton had been joined by a major grower and brewer. Gregory Blaxland had arrived in the colony in 1806 with, among other things, ‘2 cases of plants, hops, etc, in cabin’.⁶⁴⁰ While Blaxland had succeeded in bringing hop plants to the colony, it seems they did not survive. When he established his hop field in the 1810s, it was from 800 cuttings purchased in the colony at 1s a piece. In 1816, ‘after losses by dry seasons hot winds and damage done by the men they have at times by necessity been trusted to I have this year looked forward with confidence to some remuneration for my trouble and capital expended’.⁶⁴¹ In line with his big plans for his brewery Blaxland was selling 15,000 hop sets in 1815.⁶⁴² Like Squire, he was no doubt hoping to encourage the development of independent suppliers, as well as taking advantage of a lucrative sideline. This was also the case with Kinsela, who had established a hop plantation in the early 1810s and advertised several thousand hop sets for sale in 1813.⁶⁴³ In pursuit of this strategy, Squire even claimed in 1820 that he had ‘given away a great quantity of hops [i.e. hop cuttings] to several people’.⁶⁴⁴

By 1818, New South Wales had ‘several flourishing plantations owned by the brewers’.⁶⁴⁵ Governor Macquarie thought colonial hops ‘little, if at all, inferior to those of Kent’.⁶⁴⁶ The next year, Rushton’s hop plants failed and Squire’s produced only half a ton from seven or eight acres, compared to nearly three quarters of a ton from five acres in 1812. The failure of the hop crop in 1819

⁶⁴⁰Blaxland to Under-Secretary Chapman, 1 March 1805, HRNSW V, p. 569. His provisions for emigration also included a wire bottom for a kiln and two sets of coopers’ tools.

⁶⁴¹11 May 1816, AONSW, Col. Sec. 4/1735, pp. 63-6 (6045: 799-802).

⁶⁴²SG, 26 August 1815.

⁶⁴³SG, 20 March 1813.

⁶⁴⁴Ritchie, Oral Evidence, p. 117.

⁶⁴⁵Wentworth, *New South Wales*, p. 420.

⁶⁴⁶Macquarie to Bathurst, 22 March 1817, HRA IX, p. 214. In a later letter to Bathurst, Macquarie said the local hops were ‘much inferior to the English hops’ (22 March 1819, HRA X, pp. 82-3). This was in a letter supporting Squire’s request to import hops freight free.

was not due to drought but to heavy rain from early February till mid-March.⁶⁴⁷ Rushton curtailed beer production in 1819; Squire was quick enough to purchase the four tons of hops that had arrived on the *Surry* on 1 March 1819.⁶⁴⁸ Whether Rushton chose not to bid for the cargo or was beaten to the punch is not known. His decision not to operate in 1819 is curious as the other two major brewers – Squire and Lawrence – continued in production using imports.

In 1820, Archibald Bell wrote that hop plants ‘thrive here, in an extraordinary degree, & are not subject either to fly or blight’.⁶⁴⁹ The absence of pests and diseases which could so decimate the plant in England would have been a great benefit. The hop likes warmth, an airy but sheltered aspect, and rich soil, which it might have found at Rushton’s and Squire’s locations. Bell thought the soil at Hawkesbury was very favourable to the hop, where he had an acre and a half in cultivation.⁶⁵⁰ Great progress had been made since King informed Banks in July 1805 that ‘Our Hops thrive exceeding well & a very considerable number of cuttings have been taken... [even though] those who are accustomed to its growth in Europe pronounce it unlikely to do well here’.⁶⁵¹ But the doubters had been right. The summer heat of Sydney, Ryde and Windsor was too much for the hop, and the climate and soil were far better in Tasmania, where the future of the industry truly lay. Squire was one who found ‘the Colonial Hops very good, but I think they grow better at the Derwent, than they do here’.⁶⁵²

The early growers in New South Wales had done a remarkable job in the circumstances. In 1821, five growers had 15.5 acres under hops.⁶⁵³ The yield is impossible to estimate accurately given the wide differences in experience to then.

⁶⁴⁷Rushton’s Petition of 1 March 1820, Wentworth Family Papers, ML, A765, p. 7 (CY 727, p. 364). The loss of crops in the Hawkesbury is discussed in Macquarie to Bathurst, 24 March 1819, HRA X, p. 89.

⁶⁴⁸Ritchie, Oral Evidence, p. 117.

⁶⁴⁹Evidence of Archibald Bell, undated 1820, in Ritchie, Written Evidence, p. 63.

⁶⁵⁰Evidence of Archibald Bell, 27 November 1819, ML, BT 5, p. 2062.

⁶⁵¹P. G. King to Joseph Banks, 21 July 1805, ML, Banks Papers vol. 7, King 1788-1805, A78-6, pp. 264-5 (FM/1749).

⁶⁵²Ritchie, Oral Evidence, p. 117.

⁶⁵³Fletcher, *Landed Enterprise*, p. 204, using the 1821 Land and Stock Return.

If an average yield was 400 lbs per acre, then they were producing 6,200 lbs, sufficient for 99,200 gallons of beer. This was a significant level of production although still less than a quarter of total hop use in 1821. In later decades, the hop industry, especially in Tasmania, would provide Australian brewers with large amounts of high quality hops at prices well below those which brewers paid in 1820.⁶⁵⁴ The development of the hop industry, however, would follow the development of the brewing industry, rather than the other way around.

Malt

Beer is made from malt. In the process known as malting, grain is steeped in water, swelling in size, before being laid out to germinate, and then dried in a kiln. Malt is bulky but perfectly transportable, and was often carried on board ship to brew as an anti-scorbutic, most commonly being added to molasses and spruce to make spruce beer. In his earliest days as a brewer, Squire had used some imported English malt for important customers and, no doubt, some imported grain also found its way into the brewer's mash tun in the early years of settlement. But unlike the industry's heavy use of imported hops, a reliance on imported malt or grain would have been an impediment to expansion. In 1821, using imported wheat would have raised the price of a hogshead of Squire's best beer by more than a third, from, say, £4.16.0 to £6.10.8.⁶⁵⁵ The price advantage which local beer enjoyed over imports would have been considerably eroded if

⁶⁵⁴Pearce, *Hop Industry*, p. 140.

⁶⁵⁵This estimate uses Squire's length of 8 bushels of wheat to a hogshead of his best beer and assumes a price of 2s a gallon. Local wheat was selling for 8/8 per bushel in early 1821, compared with 13s for wheat from Bengal (SG, 13 January 1821; Evidence of Edward Riley to Bigge, 17 January 1821, in Ritchie, *Oral Evidence*, p. 109). This advantage appears to have been entirely due to transport costs. Riley gives the freight rate from India as £12.10 per ton. For heavy bushels of, say, 56 lbs, freight was 6/3 per bushel. The free on board price of wheat in India was therefore 6/9. For lighter bushels of, say, 40 lbs, freight becomes about 4/6 and the f.o.b price of wheat in India about 8/6. A comparison with English grain prices gives a different story. Average wheat and barley prices in England and Wales in 1819 were 9/2 and 5/10 per bushel (*Annual Register for the Year 1819*, Baldwin, Cradock and Joy, London, 1820, p. 307). In New South Wales they were 8/4 and 4/9 (Table 6.2).

relatively cheap local grain had not been available, and this advantage was strengthened by the widespread use of maize.

The classic grain for making beer is barley, which has considerable advantages over other grains during malting. While germinating, the shoot of the barley plant travels inside the grain for several days before emerging at the other end. In wheat grains the shoot emerges quickly and is more likely to be damaged when being turned in the couching room. Barley corn has an outer husk which helps to protect it from disease during germination. Wheat is huskless and so more easily infected. The barley husk also serves as a natural filter during mashing. Finally, barley responds readily to warmth and is more easily germinated.⁶⁵⁶ Wheat is used by brewers, most notably in the famed Weisse beers of Germany, where it constitutes between 25 and 60 per cent of the mash, the rest being barley.⁶⁵⁷ Oats also find their way into some beers, most obviously in oatmeal stout. The use of cane sugar was legalized in Britain in 1847.⁶⁵⁸ Maize and rice were allowed into the mash tun in Britain from 1880 and were used as adjuncts, along with sugar, to produce lighter, brighter and more stable beers. These fresh 'running' ales were popular with the public for both their taste and their price, which could be brewed throughout the year and did not require lengthy maturation.⁶⁵⁹

The use of maize and rice also answered a technical problem facing British brewers. Advances in farming techniques had greatly improved the quality of barley resulting in significant increases in the yield of fermentables during mashing. Maltsters and brewers, however, were not pleased with the result. In high gravity beers, these new barleys led to persistent 'beer haze'. Reducing the quantity of malt used in the grist would have re-established clarity but made a

⁶⁵⁶Michael Jackson, *The New World Guide to Beer*, Doubleday, Sydney, 1989, pp. 18-19.

⁶⁵⁷Jackson, *Beer*, pp. 60-2.

⁶⁵⁸Peter Mathias, 'Brewing archives: their nature and use', p. 23.

⁶⁵⁹R. G. Wilson, 'The Changing Taste for Beer in Victorian Britain', in R. G. Wilson and T. R. Gourvish (eds), *The Dynamics of the International Brewing Industry Since 1800*, Routledge, London, 1998, p. 101.

weaker beer. While cane sugar – which is added during brewing, not during mashing – was a convenient source of alcohol, it produced a thinner bodied beer and was not favoured by British brewers except in small amounts. Successful experimentation led to brewers using maize and rice for up to 20 per cent of the mash. These alternative forms of starch kept the alcohol content and body up, while solving the problem of haziness from an all-barley brew. It was later discovered that it was the higher nitrogen content in the newer barleys which caused beer haze. This was a particular problem in the infusion system of mashing used in making British ale. By contrast, the nitrogen content of the new barleys was not a problem in the decoction system of mashing used in much of Europe.⁶⁶⁰ There was not the same technical reason, then, for amending the Bavarian Reinheitsgebot (or Purity Pledge), which allowed brewers to use only malt made from barley and wheat, as there was for Gladstone's 'Freeing of the Mash Tun' in 1880. Maize, rice and other adjuncts like wheat flour and flaked barley have an important place in British brewing practice.

Cane sugar, however, was used to combat the problem of a high nitrogen content in late nineteenth century Australian barley. Farrer says that the addition of cane sugar, 'was an advantage in Australia because local worts were higher in nitrogen than in Britain. Under Australian conditions it was a technological advance but its use gave rise to newspaper controversy in 1898'.⁶⁶¹ He is unaware that the British industry was facing exactly the same problem from nitrogen in the late nineteenth century, and had dealt with it by introducing maize and rice into the mash tun. Merrett deals with the same problem in the context of the development of lager brewing in Australia in the 1880s and after.

This new product solved many of the technical problems that had perplexed brewers for generations. Lager beers were more biologically

⁶⁶⁰Line, *Brewing*, pp. 55-6.

⁶⁶¹Farrer, 'Food Technology', p. 105.

stable, largely as a result of the application of cane sugar to prevent the yeast acquiring an excess of nitrogenous food.⁶⁶²

As pointed out already, this is wrong. Lager was more stable for a number of reasons, most obviously, the cool fermentation and cold maturation (lagering) which are the distinctive features of this type of beer. And because of the decoction system it did not face the same problems from excess nitrogen as did ale. The use of adjuncts (maize, rice and sugar) in making lager was neither unique nor even necessary. It was in the ales, which would eventually be squeezed out of the market by lager, that sugar answered this particular technical problem. As Dunstan explains, Australian beer in the 1880s was almost entirely ale, made with malt, hops and the addition of sugar. The first lager breweries in Melbourne and Bendigo in the 1880s included the Gaminus, run by two Germans who probably adhered to the *Reinheitsgebot*, and the Foster Lager Brewing Company, whose use of malt and hops only is shown in 1892 by the fact that it paid the 2d Victorian excise levied on beer made with pure malt, rather than the 3d paid by brewers who also used sugar.⁶⁶³

Parsons's study of technological change in brewing from 1870 to 1890 makes it clear that the advances of the time in cleanliness, ventilation and other practical techniques were applied to ale brewing. The most controversial of these was the use of cane sugar, which dealt not only with the high nitrogen content but also the high albumen (or endosperm) content of barley. 'The use of cane sugar was the first significant colonial contribution to brewing technology' and in the early 1880s, Victorian brewers used it for up to 50 per cent of fermentables. Interestingly, the use of sugar affected the yeast and made the beer cloudy although, unlike beer haze from excess nitrogen, this could be dealt with by fining.⁶⁶⁴ This may be part of the story of one of the few survivors of the

⁶⁶²Merrett, 'Australian Brewing', p. 230.

⁶⁶³Keith Dunstan, *The Amber Nectar*, Viking O'Neil, Melbourne, 1987, pp. 18-19, 21.

⁶⁶⁴T. G. Parsons, 'Technological Change in the Melbourne Flour-Milling and Brewing Industries,

'lagerisation' of Australian beer – the century-old Coopers Sparkling Ale – which uses cane sugar for 18 per cent of its fermentables, and has a distinctively cloudy appearance.⁶⁶⁵ Sparkling ale was a recognised style in the 1880s. In the great Centennial Exhibition in Melbourne in 1888, it was a separate category along with pale ale, bitter ale, strong ale, stout and lager. The gold medal for the sparkling ale division was shared by the Victoria Brewery and Cascade from Tasmania.⁶⁶⁶

Parsons's discussion of the use of sugar in Australian ale brewing in the late nineteenth century corrects the mistaken connexion between sugar and lager brewing suggested by Merrett. He also accurately reflects the brewing literature of the time which saw the use of sugar as a technical innovation. And he is right to regard the late nineteenth century as a time when a number of technical advances were made in brewing, especially in Melbourne. But innovation and experimentation to meet technical problems in production, including the use of sugar, had occurred in Sydney in the first decades of settlement. Early colonial brewers had considerable problems with colonial barley, which malted irregularly and produced too little fermentable material. Maize malt overcame both problems and it was discovered that the all-maize beer worked better still with the addition of cane sugar during brewing. The colonial style of ale which was produced was quickly made, sweet, and meant for immediate consumption. The circumstances, and the particular problems being addressed, were different, but the two episodes are still remarkably similar in the nature of the problem, the response and the style of beer produced.

1870-90', *Australian Economic History Review*, 1971, vol. XI, no. 2, pp. 139-46.

⁶⁶⁵Protz, *Beer*, p. 160.

⁶⁶⁶Dunstah, *Amber Nectar*, p. 13.

Barley

Barley production had been very small throughout the 1790s. In 1792 there were 24.25 acres under barley. This had grown to only 26.5 acres in 1797, before more than doubling to 57.5 acres in 1798. This was still less than 1 per cent of total acreage under grain.⁶⁶⁷ Barley acreage had increased to 255.5 acres in 1802 and doubled in each of the next two years, to 1,080 acres by 30 July 1804. King wanted increased cultivation of barley in order to supply the government brewery, and when he received 15 bushels of seed barley in late June 1804 he was enthusiastic.

Altho' the season was far advanced, it was sowed immediately, and as it arrived in very good order, I do not doubt but the increase will be sufficiently abundant to sow a quantity of Government ground next year, as well as distributing small quantities for the same purpose to the best settlers.⁶⁶⁸

The barley crop failed at the end of 1804.⁶⁶⁹ Land under barley slowly declined to 1,058 acres in August 1805 and then to 1,003 acres in August 1806.⁶⁷⁰ Barley production almost ceased in 1810 with only 10 acres sown, after which acreage steadily increased to 1,142 acres in 1819.⁶⁷¹

The failure of the barley crop was not the fundamental reason for the waning of interest in barley. Barley makes poor bread which crumbles easily because of its low gluten content. It finds its chief use in brewing and as cattle feed. Cattle were largely grazed in the colony and the demand from brewers was

⁶⁶⁷HRA, I, p. 401-2; HRA, II, p. 198.

⁶⁶⁸King to Hobart, 14 Augsut 1804, HRA V, p. 11

⁶⁶⁹SG, 16 December 1804.

⁶⁷⁰HRA V, pp. 608-9, 773. Fletcher, *Landed Enterprise*, p. 229, has mostly the same figures, the differences arising from different reporting months.

⁶⁷¹Fletcher, *Landed Enterprise*, p. 229.

low and declining. The poor performance of the government brewery from late 1804 to early 1806 may have prompted some farmers to lose interest in it, despite the exhortations of government. More importantly, commercial brewers had already been using maize for ten years and while some of them gave barley a try when it became available, difficulties in its use led them to rely on maize as the basis of the industry's expansion. Without the demand of brewers, barley was condemned to being a minor crop in the colony.

Squire was an important brewer who tried to use barley around 1804, when it was being promoted by King. On 1 and 8 July 1804, he had advertised in the *Gazette* for a thousand bushels of barley. He appears to have brewed with barley only in winter, brewing from maize in summer. On 4 and 11 November 1804 he advertised for maize for immediate delivery and for 1,000 to 1,500 bushels of barley to be delivered in February 1805. Squire was still advertising for the barley on 18 and 25 November, just before the barley harvest, while he had contracted for his requirements of maize. As it turned out, the barley harvest failed in December, although some unripe and, therefore, unusable barley had been supplied to the government brewery in November (see Chapter 3).

It was not just that barley was hard to buy; it was hard to use. The Bigge Inquiry in 1819-21 provided ample evidence of the problems with colonial barley, although opinion was not unanimous. Squire had found from experience that:

The Colonial Barley ripens irregularly, and in malting vegetates unequally, which is a great impediment to the malting. 6 Bushels of English Barley are equal to 10 of Colonial. In malting for Spirits this would not be felt so much as it would be mixed with Indian corn and rye, of which last there is now grown a great quantity. I have brewed almost entirely from Indian Corn, as the barley is so bad.⁶⁷²

⁶⁷²29 December 1820, in Ritchie, Oral Evidence, p. 116.

Regular germination was an essential requirement for profitable malting, and depended on the quality of the malt, the environmental conditions, the availability of equipment, and the expertise and attention of the maltster. Generally speaking, the cooler months were best for malting, although 'Not quite the same degree of hazard attended malting in hot weather as brewing'.⁶⁷³ In Australian conditions, however, malting in the heat became that much more hazardous. But even if malting was confined to the winter months in the coldest part of the settlement, there were still problems. John Howe reported that barley malt could 'only be made good in winter in this climate and then not so perfect as at home'. This was even in Windsor and with a very short malting season from May to August.⁶⁷⁴ Expertise may also have been lacking somewhat in the colony, although the problem with malting barley was so widespread that there must have been more to it than a deficiency of skill. Mann attributed problems in malting grain in general 'to the want of proper utensils than any deficiency of ability'.⁶⁷⁵ Colonial barley, however, was a particular problem, and its inferiority was shown at harvest time as well as during malting. Howe reported that barley both 'grows and ripens more irregularly than in England'.⁶⁷⁶

Further, colonial barley malt produced far less fermentable sugars during mashing. Blaxland's experience with colonial barley was that it yielded only 40 to 50 per cent of the saccharine matter of English barley. This, he felt, arose from the climate.⁶⁷⁷ Michael Byrne – brewer, convicted illicit distiller and prospective legal distiller – reported the same inferiority of colonial barley in distilling. It ripened unevenly and produced too little sugar. He found more success with rye, and had the best results with maize.⁶⁷⁸

⁶⁷³Mathias, *Brewing Industry*, p. 406.

⁶⁷⁴Evidence of John Howe to Bigge, 15 December 1820, ML, BT 2, pp. 729-35.

⁶⁷⁵Mann, *New South Wales*, p. 43.

⁶⁷⁶Evidence of John Howe to Bigge, 15 December 1820, ML, BT 2, pp. 729-35.

⁶⁷⁷Evidence of Gregory Blaxland to Bigge, 22 August 1820, ML, BT 5, p. 2108.

⁶⁷⁸14 January 1821, in Ritchie, *Oral Evidence*, p. 118.

Some of the colonists defended the quality of local barley. Robert Cooper, a spirits merchant and former distiller in England, felt both 'the Skinless barley & the maize as good as any barley in England'.⁶⁷⁹ Archibald Bell reported that 'The skinless barley yields too, a most abundant crop & of a bold grain, and some excellent beer has been already made in a private family', although he appears not to have thought much of commercial brewing, whether it used maize or barley.⁶⁸⁰ W. C. Wentworth also praised the skinless barley, 'or as it is termed by some, the Siberian wheat [which] arrives at very great perfection, and is in every respect much superior to the common species of barley'. He added that 'the culture of this grain is limited to the demand which is created for it by the colonial breweries', showing that the use of skinless barley was not limited to the single private brewer referred to by Bell and that brewing was not completely dominated by maize.⁶⁸¹

For those brewers who used barley, the practice in the late 1810s was probably the same as Squire's practice in the early 1800s: brew from barley in winter and from maize in the warmer months. Such a practice required storage of the grain if buying at harvest time, as the barley was harvested in November and December and maize was taken in from late March to late May.⁶⁸² Squire's evidence suggests that 10 bushels of colonial barley was required to produce a hogshead of his best beer, whereas only 8 bushels of wheat or maize were required.⁶⁸³ At times, the price of barley was sufficiently low compared with maize to justify the greater quantity of grain per hogshead required and the additional costs in malting and handling (see Table 6.1). Rushton is the most obvious of the main brewers to have brewed at least partly from barley. In 1820, he stated in his petition for a licence that he would 'continue brewing with Malt

⁶⁷⁹14 January 1821, in Ritchie, Oral Evidence, p. 117.

⁶⁸⁰Ritchie, Written Evidence, p. 63. See also Bell's oral evidence, 27 November 1819, ML, BT 5, p. 2062.

⁶⁸¹Wentworth, *New South Wales*, p. 91.

⁶⁸²Wentworth, *New South Wales*, pp. 91-3.

⁶⁸³In Ritchie, Oral Evidence, p. 116.

only – which will encourage agriculture’, although this may have meant that he made beer solely from malted grain, without sugar, rather than that he made an all-barley-malt beer.⁶⁸⁴

Bigge was overstating his case when he reported that maize ‘with sugar has been universally substituted for barley in the breweries of New South Wales’.⁶⁸⁵ But he was describing usual practice. General opinion held that this would not change and that the future of barley growing, malting and even brewing lay in Tasmania. Squire had found the barley from Port Dalrymple [in Tasmania] ‘to be very good’, an opinion supported by Byrne and Blaxland. From the body of evidence, Bigge concluded that

Whenever the cultivation and growth of barley shall have been extended in Van Diemen’s Land by a better system of agriculture than that which has hitherto prevailed there, little doubt will remain of the success of the breweries, or of their superiority to those in New South Wales. The advantages of a cooler temperature during the process of malting as well as brewing, will give a preference to that colony for such undertakings.⁶⁸⁶

Wheat

Wheat beers have a long pedigree. They are made with warm-fermenting yeasts, and are therefore within the older ale group of beers rather than the modern lagers. Wheat, however, is harder to brew from than barley, and the price of wheat in the colony was significantly higher than the price of maize. Both wheat and maize were used to make flour and bread, but maize had large additional markets in the brewers and pig farmers. The latter acted as a safety valve for maize

⁶⁸⁴Petition of 1 March 1820, Wentworth Family Papers, ML, A765, p. 7 (CY 727, p. 364).

⁶⁸⁵Bigge, *State of the Colony*, p. 77.

⁶⁸⁶Bigge, *Agriculture and Trade*, p. 33.

growers by taking up much of the surplus during good years.⁶⁸⁷ And from the earliest years of settlement, maize had consistently outperformed wheat in yields per acre. At the end of the 1810s, the Surveyor-General, John Oxley, reported a common yield of 10 bushels per acre for wheat, with a top yield of 35 bushels on the best alluvial land. By contrast maize yielded 30 to 60 bushels.⁶⁸⁸ Wentworth's estimates for yields on the best alluvial land were 30 to 40 bushels per acre for wheat, about 50 bushels for barley and 80 to 100 bushels for maize.⁶⁸⁹ Maize was a safer crop for farmers, who continued to plant it in large quantities even though wheat was generally two to three times the price of maize.

Rushton had used wheat in late 1804, after the barley crop had failed and he may well have used it from time to time in later years.⁶⁹⁰ Squire began using wheat from Tasmania in the late 1810s. As with barley, he found the wheat from Port Dalrymple to be very good. 'I have used the latter lately in brewing beer, and found that it answers my purposes very well.' He used the same quantity of wheat as maize to make a hogshead of his best beer: 8 bushels.⁶⁹¹ Both these references suggest that the brewers were making all-wheat beers, contrary to modern practice which uses wheat in combination with barley. While two of the three major brewers of the time made wheat beers, they were not common. Byrne, the brewer, found wheat to be less successful than barley in distilling. It yielded the same quantity of spirits as barley, 'but it does not produce so good a spirit for keeping'.⁶⁹² He probably found the same with brewing from wheat.

⁶⁸⁷Evidence of William Cordeaux, Deputy-Assistant-Commissary-General, c. October-November 1819, in Ritchie, *Oral Evidence*, pp. 97-8.

⁶⁸⁸John Oxley to Bigge, sometime before 17 November 1819, in Ritchie, *Oral Evidence*, p. 74

⁶⁸⁹*New South Wales*, pp. 92-3.

⁶⁹⁰HRA V, pp. 276-7.

⁶⁹¹Ritchie, *Oral Evidence*, p. 117.

⁶⁹²Ritchie, *Oral Evidence*, p. 118.

Maize

When Boston and his partners turned to maize for their brewery in the 1790s, few would have suspected that they were pioneering a practice which would be the mainstay of brewing in the first quarter of the nineteenth century. Maize had become the favoured grain crop in the earliest years of settlement as it gave higher yields. In 1792, 84 per cent of land under grain was given over to maize, compared to 15 per cent for wheat and 2 per cent under barley. Maize suited hand hoeing and became the particular favourite of the small settlers.⁶⁹³ For the brewer, maize was the cheapest source of grain. In the second half of the 1790s, government prices for maize were 4s to 5s per bushel, while barley was 6s to 10s and wheat, 8s to 12s.⁶⁹⁴ This was the case still in 1805 when 4s a bushel was the upper price for maize, compared with 5s for barley and about 8s for wheat.⁶⁹⁵ By this time, Squire was probably already turning away from his brief affair with barley.

But, as pointed out, it was not just the lower price which attracted brewers to maize. Indeed, from 1811 onwards, maize was usually more expensive than barley. The attraction of maize was its regularity in malting and its greater yield of fermentable sugars, which, from Squire's figures, was in the order of eight bushels of maize being equal to ten of local barley. Further, Squire was 'able to make malt all the year, especially from Indian corn. This grain vegetates better in the warm season'.⁶⁹⁶ Better still, as Howe reported, 'a number of Persons brew out of Malted Maize or Indian Corn which may be done at any season of the year tho' it makes very indifferent Beer without a great quantity of sugar'.⁶⁹⁷ The ability to make malt and to brew in summer was a boon to the colonial brewers. It

⁶⁹³Dunsdorfs, *Australian Wheat-Growing*, pp. 15, 17.

⁶⁹⁴HRA I, p. 685; HRA II, pp. 591, 594, 692.

⁶⁹⁵HRA V, pp. 679, 710.

⁶⁹⁶Ritchie, *Oral Evidence*, p. 116

⁶⁹⁷Evidence of John Howe to Bigge, 15 December 1820, ML, BT 2, pp. 732-3.

allowed them to meet the peak demand for beer as it occurred rather than having to malt and brew in larger quantities in winter and store a surplus to meet summer consumption. While brewing all year round may have lessened the overall quality, it saved the brewer from the considerable expense of having a larger capacity brewery which would lay idle for half the year, and greatly reduced the costs of holding stock, including the cost of large cellars. It also allowed for very quick responses to changes in the level of sales. Continuous brewing greatly reduced the cost per hogshead of colonial beer. By contrast, even the most optimistic estimate of the malting and brewing season using barley was about six months in the Hawkesbury, while it was shorter still in Sydney.⁶⁹⁸

The brewers appear to have used white maize rather than the yellow maize which modern Australians know as 'corn on the cob'. King's list of plants in the colony in 1803 has only a yellow grained maize, but white maize became widely grown.⁶⁹⁹ William Cordeaux, in the Commissary, stated that 'here there is a great quantity of white Maizes'.⁷⁰⁰ While Cordeaux did not consider the white maize as good as the yellow for making flour, Byrne reported that the 'white flat maize, called here Breadcorn, is the best sort for distilling from, it malts better'.⁷⁰¹ It is likely that brewers used yellow maize in the 1790s and early 1800s but switched to white maize as it became more available. Sweet corn does not store well because of its milkiness. White corn stores better and is more suited to grinding. In modern brewing, maize is used as an adjunct for various reasons: to deal with beer haze, as a cheap source of fermentables, and to lighten a beer's body and taste. When used as an adjunct it is not malted but must be boiled to gelatinise the starch, which then can be converted to sugar by the malted barley which makes up the larger part of the mash.⁷⁰² The colonial brewers, however, were not using

⁶⁹⁸Oral evidence of Archibald Bell to Bigge, 27 November 1819, ML, BT 5, p. 2062.

⁶⁹⁹King to Hobart, 9 May 1803, HRA IV, p. 234.

⁷⁰⁰Evidence of William Cordeaux, c. October-November 1819, in Ritchie, Oral Evidence, p. 98.

⁷⁰¹14 January 1821, in Ritchie, Oral Evidence, p. 118. The popular name suggests that white maize was better for making bread than Cordeaux suggests.

⁷⁰²Line, *Brewing*, p. 55.

maize as an adjunct but as the grain for malting and it appears that their brews were 100 per cent malted maize, rather than a combination of malted and unmalted maize.

The use of maize did not guarantee successful malting and brewing.

Kinsela advertised

that he has at considerable expence, and by many experiments, established the true system of managing the Grain of this Climate, in its different stages, for producing a strong, clear, wholesome and durable Beer.— The Public can be supplied at his Brewery with strong beer, not having that tendency to the acetous fermentation, so much complained of in the Malt Liquors of this Colony.⁷⁰³

That is, his beer did not go sour, unlike the product of some of his competitors. We do not know what Kinsela's 'true system' was, but by 1809 it is likely that both he and his competitors were largely brewing from maize and sugar.

Sugar

The use of cane sugar in brewing has long been a contentious issue among brewers and beer drinkers. Since the reign of Henry VIII, the law in Britain had permitted the use of malt and hops only, and this position was reinforced early in the nineteenth century, only to be temporarily set aside shortly after as malt prices soared due to poor barley seasons and the general effect on prices of the Napoleonic wars.⁷⁰⁴ After this brief interlude, the law returned to normal. Sugar remained illegal in British brewing until 1847, but since then has had its place in

⁷⁰³SG, 29 January 1809. The point is repeated in SG, 2 June 1810.

⁷⁰⁴Mathias, *Brewing Industry*, pp. 52, 234. The relevant statutes preventing the use of sugar were 23 Henry VIII, c. 4 and 42 Geo. III, c. 38, s. 20-1. The statute allowing the temporary use of sugar was 52 Geo. III, c. 45. It was passed on 9 June 1812 and continued to 1 October 1813 by a proclamation of 26 October 1812.

British brewing practice. It may be introduced into the copper during boiling. As sugar has no nitrogenous matter, it will add to the gravity and so the alcoholic strength of the beer, without affecting clarity. For this reason also, the inclusion of sugar will produce a beer that will mature more quickly than an all-malt beer. Sugar sweetens the final result, and this is often a quality looked for by brewers. Dark sugars like Demerara are felt to give a luscious taste to beer, and make the beer darker, for which caramels are also often used. In using sugar, though, discretion is called for, or else the result will be a poor quality beer.⁷⁰⁵ A beer with too much sugar will be thin, alcoholic and with poor head retention.⁷⁰⁶ This is the result if fermentation is more complete. If the fermentation is brief and relatively incomplete, the beer will be cloyingly sweet, have a lower alcohol content, and still have a poor head. Sugar has a second role as a starter for secondary fermentation in the cask or bottle at the very end of the brewing process, where it is used in very small quantities.

In New South Wales, sugar was an essential part of brewing with maize. In brewing from wheat, Squire had no need for sugar but he put 10 to 12 pounds of sugar to eight bushels of maize to make a hogshead of his best ale.⁷⁰⁷ This would have produced a more alcoholic beer, but the reason Squire and probably every other brewer used sugar with maize was that it produced a better result than an all-maize beer. Some in the colony suggested that the amount of sugar used was higher than in Squire's recipe. Howe reported that a 'great' but unspecified amount of sugar had to be used with maize beer if the result were not to be 'very indifferent'. Blaxland argued that a palatable maize beer required that one third of the fermentables should be sugar, and he advocated the use of sugar in large amounts regardless of the grain which had supplied the malt. This would keep two to three weeks 'whilst it continues to give out or generate fixed air after which it

⁷⁰⁵Line, *Brewing*, pp. 60-4.

⁷⁰⁶C. J. J. Berry, *Home Brewed Beers and Stouts*, The Amateur Winemaker, 6th edition, Andover, Hampshire, 1971, p. 35.

⁷⁰⁷Ritchie, *Oral Evidence*, p. 117.

begins to form acid or vinegar'.⁷⁰⁸ It was this problem of producing a beer that would keep that Kinsela had claimed to have overcome in 1809. The problem was not confined to colonial Australia in the early nineteenth century, especially in summer. 'The uniquely surviving monthly minute books of Truman, commencing in 1884, reveal that for years their major problem was brewing in summer a consistent running beer that had more than a fortnight's life.'⁷⁰⁹

Squire was a working, successful brewer, and his opinion about the best quantity of sugar to use must be given precedence over Howe and Blaxland. At 10-12 pounds a hogshead, his purchases of sugar would have been large enough, at several tons a year. His known purchases of sugar were large. On 20 October 1819, he bought over a ton for nearly £120.⁷¹⁰ But his rate of use, at about one pound to four or five gallons is quite standard for modern ale brewing and should not be thought of as demonstrating a lack of standards.⁷¹¹ Equally, it allowed him to produce beer of a reasonably consistent standard with maize throughout the year, and therein lay the basis for the success of his own brewery and of brewing in general.

The Colonial Style

Made with malted maize and sugar, throughout the year, often under hot and humid conditions, colonial beer was undoubtedly distinctive and often criticised as of poor quality. From a distance of nearly two centuries, it is impossible to pass judgement on the style and standards of colonial beer, but there is sufficient information available to give us some idea of what a pot of colonial beer was like in 1820 and how it compared with British beer at the time.

⁷⁰⁸Blaxland's Memorial to Bigge, 2 January 1821, ML, BT 25, p. 5538.

⁷⁰⁹Gourvish and Wilson, *British Brewing*, p. 85.

⁷¹⁰Extract from the sale of His Majesty's Magazine, in Bigge, Appendix to Report 1822, vol. 128, p. 139 (ML, A2131). He bought five casks of 2,052 lbs at 11d per lb and 476 lbs at 10d per lb.

⁷¹¹See various recipes in Line, *Brewing*.

In comparing colonial beer with British beer, it should be noted that the latter varied widely in style, purpose and quality. Regional differences were quite pronounced in the early nineteenth century. A lightly hopped, sweet, mild, dark brown ale, brewed for immediate consumption, was the preferred beer in Newcastle upon Tyne and in the surrounding counties of Northumberland and Durham. By contrast, Bristol's 'old beer' was kept in the wood for eighteen months.⁷¹² Edinburgh ale was characteristically heavy, dominated by malt rather than hop, a Scottish taste to this day. The hard, mineral-rich water of Burton upon Trent produced the classic English pale ale, lighter in colour and well-hopped. Porter, of course, was another thing again: dark brown to black, stored in the vat for a long time, heavily hopped, and well-suited to the soft water in London. Porter was a major part of the industrial revolution, and the beer which brought brewing into the industrial age, a century before lager and zymurgy took centre stage.

Beers also differed greatly according to their purpose. There were high gravity, heavily hopped 'keeping beers', and lower gravity, milder 'running beers' for quick consumption. There were strong ales drawn from the first mash and weaker table or small beers drawn from the second or even third mashes. There were beers for export, almost always high in gravity, well-hopped and undergoing secondary fermentation in the cask or bottle, such as the famous Imperial Russian Stout. An example of this style is still produced by Courage in Britain. It is bottle-conditioned for eighteen months and has an extraordinary original gravity of 1104 degrees, an equally startling International Bitterness Units rating of 50, and an alcohol content by volume of 10 per cent. By comparison a typical English bitter today might have figures in the range of 1035-1055; 25 to 40; and 3.5 to 5, while a full strength Australian lager would have figures like 1044, 22 and 5.⁷¹³ Strong ales and porters in the early nineteenth century were in complete contrast to a

⁷¹²Sigsworth, 'Science and Brewing', p. 543.

⁷¹³Protz, *Beer*, pp. 56, 91-8, 158-62; Jackson, *Beer*, p. 165.

table beer of low gravity and alcoholic strength which might be served up to children. The practice of making table beer varied between brewers and regions. Small beer made up two thirds of total beer production in Scotland for 1803-30 but only one quarter of total production in England and Wales.⁷¹⁴ Alcoholic strength was only one indicator of quality, and an imperfect one at that. Not all British beer was of a high standard. In the early nineteenth century there was widespread criticism of adulteration by brewers and publicans.⁷¹⁵ And, of course, some brewers used better quality ingredients and attended to their task with greater professionalism than other brewers, and some publicans exercised greater care in cellaring and serving beer than other publicans.

Equally, just as British brewing practice and standards differed, not all colonial brewers were the same. Barley was used by several brewers at one stage or another, and some persevered with it more than others. Practice during malting, mashing, brewing, fermentation and maturation would have varied. The following description of colonial beer is, then, very much a generalisation.

Colonial beer was ale not porter. Porter brewing was not unknown in the colony. Among the various styles Larken claimed to make in 1804 was porter, although one has to question whether it was truly 'prepared after the system of the British Breweries'. But almost all colonial beer was ale. The government brewery made ale, and sold its product in 32 gallon ale barrels rather than 36 gallon porter barrels.⁷¹⁶ Thompson would have made ale with the equipment he purchased from King in 1806. Rushton when he moved to Wilshire's in 1808 and thereafter in his own premises, Kinsela, West and Stabler advertised strong beer, by which they almost certainly meant strong ale rather than porter. Lawrence advertised that he was an ale brewer and only proposed establishing a porter brewery in 1820. He probably did not proceed with the plan and it would be a later generation of brewers who would include porter in their range. Payne introduced a new line in

⁷¹⁴Donnachie, *Brewing*, p. 113; Mitchell and Deane, *Historical Statistics*, p. 252.

⁷¹⁵Gourvish and Wilson, *British Brewing*, pp. 6-7.

⁷¹⁶Government Order, 6 October 1804, HRA V, pp. 273-4; SG, 30 September 1804.

March 1827 of 'fine colonial brown stout', and in April 1827, Hughes promised to produce 'English Ale' and 'London Porter' at his new brewery.⁷¹⁷ Newnham and Tooth commenced operations in 1835 carrying both ale and porter.⁷¹⁸ Even then, porter and stout were much less popular than ale.

It is easy to see why early colonial brewers did not make porter. Leaving aside whether malted maize would have responded well to being heavily roasted, the colonial brewers did not have the facilities or, initially, the finances for the lengthy maturation of up to a year which porter underwent in England before barrelling.⁷¹⁹ Ale could be sold in 2 to 4 weeks, which saved the heavy costs of maturation vats, lengthy casking and cellaring, and gave a much quicker financial return. London porter dominated beer imports and the early colonial brewers were happy to leave this part of the market to the world's largest and most efficient breweries.

Premium colonial beer was high in gravity. That is, it had a lot of fermentable material put into it. Squire brewed a hogshead of his best beer from a quarter (8 bushels) of wheat or maize. This was probably for an ale hogshead of 48 gallons not a beer hogshead of 54 gallons. It is unclear, however, whether he is referring to bushels of grain or malt. Grain swells during malting and so a bushel of grain becomes somewhat more than a bushel of malt. Gregory King's estimate in 1688 was about 7 per cent.⁷²⁰ In comparing Squire's beer with English beers, there is the greater problem of the considerable variation in the gravity of English beer. King's estimate for the length for strong beer was 85 gallons from a quarter of malt. In the 1740s the length of the strongest porter was only one (36 gallon) barrel from a quarter of malt, with a similar length for the strongest Burton ales. In 1777-9 the Commissioners of Excise estimated a typical length of two to two

⁷¹⁷*The Monitor*, 16 March 1827; *The Australian*, 25 April 1827.

⁷¹⁸*The Sydney Morning Herald*, 1 June 1835.

⁷¹⁹Mathias, *Brewing Industry*, pp. 381-2.

⁷²⁰Mathias, *Brewing Industry*, p. 389. The alternative way to think of this is that a bushel of malt has less grain than a bushel of barley.

and a half (unspecified) barrels of strong beer (64 to 90 gallons) per quarter. By 1800, porter brewers were drawing three barrels (108 gallons) or more per quarter.⁷²¹ It is hard to draw too much from this last figure. Porter brewing was more thorough than ale brewing, extracting far more of the fermentable sugars from the malt during mashing, and colonial grain was generally agreed to have a lower saccharine content than British barley. This was true even of the wheat and maize which was used by Squire, with eight bushels of each apparently being the equivalent of six of English barley. Further to this, British malts differed greatly in quality, for which weight per bushel was a reasonable indicator. High quality pale malts weighed about 39 lbs per bushel while best brown weighed around 35 lbs and the low end 'Long tail' Norfolk weighed 27.5 lbs.⁷²² These factors mean that the colonial ale's original gravity may not have been as high as Squire's figures suggest. Perhaps the best comparison is with King's strong ale from 130 years before, which may have been made with a quality of grain and under technical conditions closer to Squire's experience than the vast porter breweries of London.

Given all of the uncertainty, it nevertheless seems clear that Squire was brewing a relatively high gravity ale. Line gives a recipe for a barley wine using four to five bushels of malt and 24 pounds of sugar for a 48 gallon hogshead.⁷²³ That is, it uses about half the amount of malt and twice the amount of sugar of Squire's best beer. Line's recipe produces a high gravity (1080-1100) strong ale of 8-10 per cent alcohol by volume and an equal quantity of low gravity (1020-1030) small beer of 2-3 per cent alcohol by volume. In Line's approach, the fermentation is quite complete at up to 10 days, which is followed by racking for eight months, priming for secondary fermentation, and then maturation for a further six months. All of this is conducive to converting most of the available sugars into alcohol.

⁷²¹Mathias, *Brewing Industry*, pp. 17, 21, 374.

⁷²²Mathias, *Brewing Industry*, p. 415.

⁷²³*Brewing*, pp. 241-4.

It is doubtful that Squire's best beer or colonial beer in general had as high an alcohol content as Line's barley wine. Alcohol content is determined by the original gravity and the degree of fermentation. The higher the gravity, the greater the amount of fermentable material that can be turned into alcohol. The more thorough the fermentation, the more of the available fermentable material is turned into alcohol. Because of the heat, colonial ale probably had a short period of fermentation and it is equally likely that little colonial beer underwent lengthy maturation or secondary fermentation in the cask which would convert residual sugars into alcohol. The result would be a fuller bodied, sweeter beer with less alcohol, although the heat might have worked against this to some extent by accelerating the rate of fermentation so that a more thorough conversion of sugars took place in a shorter time. Rather than being thought a benefit, this was one of the great problems with brewing in the colony. Blaxland was wrong in his pronouncement that brewing would not succeed in the colony because fermentation was too quick, but he was pointing to a serious problem for brewers.⁷²⁴ During fermentation, yeast converts the wort into alcohol and carbon dioxide. Yeast activity becomes faster at higher temperatures, resulting in a loss of condition, and a beer which will be high in alcohol but flat and with a limited storage life. The yeast will also become a weaker strain and be less suitable for pitching into the next batch of beer.⁷²⁵ Fermentation in British ale brewing was conducted at a relatively high temperature compared with modern lager brewing, at about 68° Fahrenheit when the yeast was pitched. And primary fermentation was quite quick, being as little as 3 to 4 days. In the colony, however, brewing was regularly conducted at temperatures well above this and fermentation must often have been very rapid. Under such conditions, colonial brewers generally made running beers for immediate consumption, not keeping beers for storage and maturation. The heat presented a further problem by making storage a risky

⁷²⁴Evidence of Gregory Blaxland to Bigge, 22 August 1820, ML, BT 5, p. 2108.

⁷²⁵Line, *Brewing*, pp. 163-4.

business without good cellaring. Squire had an extensive cellar which could still be examined in 1914, when it was described as 'hewn out of the solid rock... cool in the hottest weather'.⁷²⁶ But it is likely that it was mainly used for short term maturation before distribution.

Other than its high gravity, colonial ale had some of the characteristics of a modern mild: a less hoppy, 'luscious', 'quick maturing beer that is ready for supping only a few days after casking'.⁷²⁷ The second, lower gravity wash would have been even closer to the style and the use of dark sugar such as Demerara, which was commonly imported, would have given the beer the darker colour which is characteristic of mild. The comment of 'A Philanthropist' in 1808 on the suitability of Sydney's soft water also points in the direction of mild. Interestingly, Line says the corny taste from maize is better suited to lagers and sweeter dark beer, such as mild, rather than drier pale ales. Unfortunately, the problem of a flat beer resulting from rapid fermentation would only have been made worse by the use of maize and wheat, both of which have less water soluble gums than barley and so give worse head retention.⁷²⁸

In the earliest years of the colony, a limited and irregular supply of hops meant that the hopping rate was often low by contemporary British standards, but this was changing from about 1806 as shipments of English hops became larger and more regular and, less importantly, as local hop production began to yield results. By 1820, hops were sufficient to give an average colonial hopping rate of an ounce a gallon. Hops would not have been used uniformly. Best ale might have had a rate of, say, one-and-a-third ounces per gallon, and small beer a rate of, say, two-thirds of an ounce. These are comparable with commercial hopping rates for ale in Britain, although most colonial beer would have been at the lower end of the hopping rate for London porter, with which many of the colonists were

⁷²⁶Hibble, 'Ryde', p. 287.

⁷²⁷Line, *Brewing*, p. 231-2. It should be noted that 'mild' referred originally to its lower hopping rate, not to its gravity or alcohol content. The older use of the term was therefore more applicable still to the colonial ale.

⁷²⁸Line, *Brewing*, p. 57.

familiar.⁷²⁹ In addition, the potency of imported hops used in the colony was somewhat lower than the average strength in England. It seems reasonable to conclude that colonial beer was a little under-hopped by the best British standards of the time. This may have been a particular problem in the colony as the heat and humidity made the preservative qualities of the hop that much more important, but this was met by immediate consumption. Colonial beer hopping rates seem quite high against modern hopping rates for typical English home brews, which can be as low as a third of an ounce per gallon for a mild, up to three-quarters of an ounce per gallon for a bitter. Commercial brewers, with better extraction methods, can brew with much lower rates. But it is impossible to compare the strength of modern hop varieties with those of two hundred years ago.

To summarise, the colonial beer was either a strong ale or table beer made from malted maize. The strong ale had a high gravity, underwent a short but rapid fermentation at high temperatures, was brewed with the addition of cane sugar, and had a limited period of maturation. It was therefore full-bodied, sweet, corny, and with an alcohol content more like a modern Australian lager than a traditional, matured strong ale. It had a poor head, and was either cloudy or brown in colour. The hopping rate was reasonable by contemporary standards although this may have been affected by the quality of the hops used. Certainly, the colonial ale was usually less hoppy than the English porters which set the standard by which the local product was judged. The table beer was thinner and lower in alcohol, and perhaps less liberally hopped, but had similar features to the strong ale which may have given it something of the character of a mild. Both types of beer were meant for quick consumption, within a matter of weeks, after which they would begin to go sour.

Drinkers were divided about the result. The governors were generally critical. King talked up the product of the government brewery but was too

⁷²⁹Mathias, *Brewing Industry*, p. 482. The peak hopping rate for porter was 3-5 lbs or one-and-a-third to two-and-two-ninths ounces per gallon. This had been falling by 1830 'as storage time diminished and taste moved towards mild beer'.

embarrassed to send Hobart a sample of the wheat beer produced in December 1804. Bligh felt the maize beer 'drank' but it needed hops, although his view seems somewhat at odds with the evidence on that score. In 1817 Macquarie expected 'very shortly to see Ale and Beer of sound and good quality made in sufficiency not only for the Consumption of the Colony itself, but also as an Article of Supply' to shipping and the Indian Market. For the present, the colony produced a 'very inferior Quality' of beer from maize.⁷³⁰ The opinions of others were divided. Bligh had the support of Luttrell in thinking the maize beer in 1807 indifferent, while Mann thought the beer 'very palatable' in 1808. The next year, 'A Philanthropist' complained of the 'miserable quality of most of the malt liquors brewed in the Colony'.⁷³¹ Bell, like Macquarie, seems not to have thought highly of the beer produced by the large commercial brewers in the late 1810s. Interestingly, opinions about individual brewers tended to be more positive. Howe thought Thompson and his successors at Windsor, Kable and Woodbury, brewed good beer. Cox thought that Blaxland sold 'most excellent Table Beer & strong Beer also', before the quality went off.⁷³² Squire came in for the most praise. According to Lycett, Squire 'was the Whitbread of New South Wales; his beverage having a general good name throughout the Colony', while Cunningham wrote that Squire's beer 'was as well known and as celebrated in this as Meux and Co.'s in your hemisphere'. He then seemingly undermines his claim by quoting an epitaph from a grave in Parramatta churchyard:

Ye who wish to lie here

Drink Squire's beer!⁷³³

⁷³⁰HRA IX, p. 214.

⁷³¹SG, 9 October 1809.

⁷³²W. Cox, Evidence to J. T. Bigge, 25 November 1819, ML, BT 5, p. 1982.

⁷³³Lycett, *Views in Australia*; Cunningham, *Two Years* [vol. I, pp. 91-2].

Historians have tended to read this as a judgement, delivered from a telling place, of just how bad the colonial beer was, but Cunningham says that Squire himself 'took a pleasure in quoting' the lines and assures us that the epitaph in fact records the virtues of Squire's beer. It seems a curious interpretation, but one which cannot be put to the test.

While the quality of colonial beer is beyond our assessment, its popularity is not. W. C. Wentworth described the progress of manufacturing in the colony, including its 'extensive breweries', but dismissed the beer which was made in them as 'so bad, that many thousand pounds worth of porter and ale [was] imported' from Britain annually.⁷³⁴ The inconsistency is obvious – the extensive breweries were necessarily selling large amounts of beer to be in business – and the evidence shows that the thousands of pounds of imported beer were only a small share of total beer sales and this had been the case for many years.

This was in large measure because the colonial brewers made cheap beer. Chapter 4 presented estimates that the consumption of colonial beer in 1821 was 11 gallons per head of population compared with one gallon for imported beer. The total value of beer production was about 5 per cent of Gross Domestic Product. Imported porter or brown stout sold at £9 to £12 for a 54 gallon beer hogshead in 1821, compared with a likely maximum price for colonial ale of £5.8.0 for 54 gallons or 2s a gallon.⁷³⁵ All of the imported beer was higher quality porter or ale. Much of the local beer was lower quality strong and table beer which sold for much less than 2s a gallon. In 1816, Rushton was selling table beer at 1s a gallon in quantities not less than four gallons.⁷³⁶

Table 6.2 brings together the available information on colonial beer prices with the prices for the other two staples of the fortunate Englishman's dinner. From 1804 to 1810, a gallon of strong beer was about four times the price of a 2

⁷³⁴*New South Wales*, pp. 111, 420.

⁷³⁵Squire's evidence to Bigge, 29 December 1820, in Ritchie, *Oral Evidence*, p. 117 (£12); advertisements in SG, 21 April 1821 (£11) and 24 November 1821 (£9).

⁷³⁶SG, 16 April 1816.

lb loaf. Blaxland's strong beer in 1816 was considerably more expensive which may be the simple explanation for his exit from the industry at that time. From prices in the 1820s (see Chapter 7) it is likely that other brewers were charging at most 2s a gallon for best strong beer in 1821, which was more in line with Rushton's price for table beer of 1s a gallon in 1816. Table beer was roughly two to three times the price of a loaf of bread from 1804 to 1816. Price changes for bread and beer were broadly in line with each other. Meat prices varied much less than the price of bread, because meat production was far less affected by drought and flood than grain production.⁷³⁷

A gallon of small beer for the price of two or three loaves of bread places it firmly on the table as a common item of consumption. In 1816, the wages of a male convict labourer were fixed at £10 per annum, in addition to his rations.⁷³⁸ Four labourers could buy four gallons a week to share, for £2.12.0 a year each. Even if the labourer drank at a Tom and Jerry, local beer was quite affordable. In England in 1804 and 1813, strong beer retailed at 6d a quart pot, but this was with a retail mark up of about 25 per cent.⁷³⁹ Even if the mark up in Sydney was a third, table and strong beer would have retailed for 4d and 8d a quart respectively. The labourer could spend his shilling a week on a quart of each in the company of others. Consuming 26 to 52 gallons of beer a year took up a quarter of a convict labourer's annual wage, but there were relatively few other ways for him to spend his pay. Moreover, many, perhaps most, earned more than £10 a year. Free labourers earned a minimum of £40 per annum in 1820, and skilled labour might earn three or four times that.⁷⁴⁰

⁷³⁷ This point was made by Wentworth, in *New South Wales*, p. 110.

⁷³⁸ General Order, 7 December 1816, in Wentworth, *New South Wales*, pp. 104-5. This was a reiteration of a standard wage set in 1804 (SG, 15 January 1804).

⁷³⁹ Mathias, *Brewing Industry*, p. 114. Prices were remarkably similar in both England and Australia.

⁷⁴⁰ A. G. L. Shaw, 'Labour', in G. J. Abbott and N. B. Nairn (eds), *Economic Growth of Australia 1788-1821*, Melbourne University Press, 1969, pp. 110-16. Wages in 1820 were probably lower than earlier in the decade, although the evidence of contemporaries is contradictory (Shaw, 'Labour', pp. 110, 115; Fletcher, *Landed Enterprise*, p. 162).

Local beer had become a common item of consumption because of the business ability of colonial brewers, in which the fundamental skill was the ability to brew relatively large quantities of cheap, drinkable beer under the circumstances. By using maize and sugar, the first generation of colonial brewers were able to brew all year round in often difficult conditions, making possible considerable economies in production. The resulting brew did not keep well and no doubt tasted odd but it was the basis for the development of relatively large, specialised commercial brewers who could reap the benefits of economies of scale and establish quite sophisticated distribution systems to most parts of the colony. According to Parsons, 'given the existing technology, colonial beer was a poor substitute for the English article. Indeed a reliable technique for brewing colonial ale was not developed until the 1880s, and until that time brewing was a risky investment'.⁷⁴¹ But in fact the brewers' empirical understanding of their business led them to a style of beer which by 1820 allowed brewing to be dominated by a handful of relatively large, longstanding and successful businesses. While the beer they produced seems quite odd, the colonial style was a technique which was reliable enough to be the basis for one of Australia's first major industries.

But there was a further dimension to colonial ale's dominance, which borders on the mysterious: taste. Locals liked it. On 17 September 1831, *The Sydney Monitor* published a long, damning and rather inaccurate article on the history and current state of the colonial brewing industry. The author was caustic about the quality of local beer, and took aim also at the father of Australian brewing – James Squire – and his maize and sugar beer. While achieving a 'degree of notoriety', the 'fame of Squire's beer never rose high among impartial judges'. Established colonial brewing practice failed against every standard of English brewing. Good English beer was made from barley malt only and was

⁷⁴¹T. G. Parsons, 'The Limits of Technology or Why Didn't Australians Drink Colonial Beer in 1838?', *The Push from the Bush*, no. 4, September 1979, p. 24.

well-hopped. It was brewed more slowly, under cool conditions during the winter months, and was properly matured. By contrast colonial ale used sugar in large quantities and was under-hopped. It was brewed without regard to the weather or the season, and was 'drawn out of the vat to-day' to be served up tomorrow. His condemnation of colonial ale's poor quality was matched only by his exasperation at its success. It was 'being manufactured in great quantities' and enjoyed the favour of the colonists, especially the native born. 'And the newer it is, the better the Sydney folks like it, because it is the sweeter'. A new style of beer had developed, which met the needs of brewers, and suited, or had shaped, the tastes of Australians.

Table 6.1: Average Grain Prices, 1809-1821 (shillings per bushel)

	Wheat	Barley	Maize
1809	21/8	9/11	9/11
1810	23/7	10/5	6/11
1811	14/5	6/3	6/6
1812	9/5	6/5	7/1
1813	15/-	7/10	9/9
1814	18/11	10/-	11/8
1815	19/2	7/4	8/2
1816	16/9	6/8	6/1
1817	13/9	5/3	8/11
1818	9/1	5/4	4/7
1819	8/4	4/9	6/-
1820	9/1	4/10	5/1
1821	9/7	4/5	5/3

Note

These are prices from the Sydney market which opened on 4 March 1809 (SG, 5 March 1809).

Sources

SG, 16 April, 7 May, 11 June, 9 July, 8 October, 26 November, 17 December 1809; Fletcher, *Landed Enterprise*, p. 234.

Table 6.2: The Price of Bread, Beef and Beer in NSW, 1804-1816

	Bread (2lb loaf)	Beef (lb)	Beer (gallon)	Brewer
1804	4d	1/9	1/- to 1/4 (both)	Rushton
1806			1/-; 6d	Rushton
			1/-; 6d	Thompson
mid-1808	4 to 5d		2/-; 8d	Rushton
early 1809	6d	1/3	2/-; 1/6	Kinsela
late 1809	1/-	1/6	4/-; 2/-	West
late 1810	10d*	1/4	3/4 (strong)	Kable (in hhds)
late 1816	5d		1/- (table)	Rushton (4 g+)
			3/- (strong)	Blaxland (trade)
c. 1818	5d	6d		

Notes

Bread prices are those set by the Assize of Bread for a 'household' loaf. The more expensive wheaten loaf is used for late 1810 only. Beef prices are those fixed by government for licensed butchers. Beer prices are for locally made strong and table beer. It is assumed that Kable and Blaxland made strong beer. In 1804, the government brewery charged the same price for strong and table beer.

Sources

SG, 29 April, 28 October 1804; 11 May 1806; 15 May, 19 June, 24 July 1808; 29 January, 1 April, 8 and 22 October 1809; 8 December 1810; 1 February 1817; Evidence of John Howe, 15 December 1820, ML, BT 2, pp. 728-9; Evidence of William Cox, 25 November 1819, ML, BT 5, p. 1982; Wentworth, *New South Wales*, p. 110; HRA V, p. 668

Chapter 7

More Beer

In 1822, both James Squire and Thomas Rushton died. Their deaths marked the end of an era for the brewing industry, as surely as Lachlan Macquarie's departure for England marked the end of an era for the colony. Macquarie left on 12 February 1822, having handed over the reins of government to Sir Thomas Brisbane in December 1821. Squire and Rushton died in harness, both having had their brewing licences renewed in March 1822.⁷⁴² Squire died after a three month illness on 16 May at the age of 68. The 'Patriarch of Kissing Point' was one of the dwindling band of first fleeters. Of his character there was no doubt: 'none ever more exerted himself for the benefit of the inhabitants than the deceased'. But clearly it was for his success in the cultivation of the hop and the resulting 'excellent quality' of his beer that he was chiefly remembered. "'Squire's beer" was well known' and much appreciated.⁷⁴³ Rushton died on 21 November, aged 78. Like Squire, he was a brewer until he died.⁷⁴⁴ In contrast to Squire, Rushton 'enjoyed generally pretty good health; and went into eternity without a moment's warning', prompting the *Gazette* to comment, 'Reader! "Prepare to meet thy God!"'.⁷⁴⁵

After Squire died, the brewery was carried on by his son, James, until he too died, in 1826.⁷⁴⁶ It then fell into disuse until 1828, when Squire senior's son-in-law, Thomas Charles Farnell announced the revival of 'Squire's old Established Brewery at Kissing Point', stating simply that it was 'too well known

⁷⁴²SG, 22 March 1822.

⁷⁴³SG, 24 May 1822.

⁷⁴⁴Colonial Secretary to 'Mr Thomas Rushton Brewer Sydney', 11 May 1822, AONSW, Col. Sec. 4/3505, p. 269 (6009).

⁷⁴⁵SG, 22 November 1822.

⁷⁴⁶James Squire, junior, married Mary Power on 9 June 1823. His name was entered on the register as 'of Kissing Point, batchelor, Brewer' (Quarterly Returns of St John's, Parramatta, recorded in Mutch Index of Births, Deaths and Marriages, ML, CY 381).

for the quality of its Beer, to need any further comment'.⁷⁴⁷ Farnell operated the brewery until his death in 1834, bringing to a close a remarkable story that had begun in 1791.⁷⁴⁸

According to Webster, Rushton's brewery was carried on by his son, Charles, and Mrs Elizabeth Smith, but the evidence is not definite. Early in 1824, Rushton's 'HOUSE and PREMISES, with the well-known BREWERY' at No. 12 Hunter Street were available to let. The advertisement recalled that Thomas Rushton had operated the brewery for many years, 'to the satisfaction of the Inhabitants of Sydney and its vicinity', and advised that the property was now in the possession of Mrs Elizabeth Smith.⁷⁴⁹ She was the executrix under Rushton's will: in April her solicitor had announced that he would launch proceedings against those indebted to the estate who did not make good their debts.⁷⁵⁰ In October 1826, 'TWO COPPER BREWING PANS one very large, with Keve Tubs Pump, Steel Mills, and other Properties belonging to Brewing' were put up for private sale by Charles Rushton at 12 Hunter Street. This attempt at sale failed and the property went to auction in November, along with 'about 100 malt kiln tiles, and a quantity of quart bottles'.⁷⁵¹ Whether Charles Rushton and Elizabeth Smith operated the brewery from Thomas Rushton's death until its disposal cannot be deduced from this information.

In the next few years the other two old hands – Nathaniel Lawrence and Michael Byrne – followed Squire and Rushton to the grave. Like Squire and Rushton, Lawrence was brewing till the end.

⁷⁴⁷SG, 21 March 1828. See also *The Monitor*, 2 April 1828. Farnell had married Squire's youngest daughter, Mary Ann, in 1824. Their eldest child, James Squire Farnell, was Premier of New South Wales in 1878-9 (G. P. Walsh, 'Squire, James', ADB, vol. 2, pp. 467-8).

⁷⁴⁸John Webster, Notes on Early Australian and Tasmanian Breweries, ML, B1111, pp. 107-9.

⁷⁴⁹SG, 22 January 1824.

⁷⁵⁰SG, 15 April 1824.

⁷⁵¹SG, 4 October and 22 November 1826. The malt tiles would have covered the floor of the couching house (see Appendix 1).

The deceased had spent the evening of Saturday from home, and returned in a state of intoxication. He was prevailed on to retire to bed, and was found dead shortly after. The Jury [at the Coroner's Inquest] returned a Verdict of *Died by the Visitation of God*.

A large gathering attended the funeral of this 'industrious inhabitant of the Colony for the last 20 years', proprietor of 'Natty's Brewery'.⁷⁵² The brewery continued to operate until about 1834.⁷⁵³ Byrne, on the other hand, had left the industry a few years before his death, probably in 1822. In late 1823, he was seeking a grant for his premises in Sydney, including his brewery, in order to arrange its sale prior to moving inland.⁷⁵⁴ While he had left the brewing business, he had retained 'the vessels and working materials' of the brewery and in late 1825 was successfully applying for a licence to establish a distillery.⁷⁵⁵ Byrne's ill health continued to trouble him. In 1825 he wrote that he had 'been many years in a bad state of health', and sometime after died.⁷⁵⁶

As the old guard was leaving, a new guard was arriving. For the most perceptive writers on the subject, such as Walsh and Dingle, it was this new generation of brewers in the 1820s which overcame the impediments which had retarded the industry in the previous decades. The first contemporary estimates of output for a large part of the industry are reported in the late 1820s, and these show that brewing was a significant activity. Among the new brewers are names

⁷⁵²SG, 19 January 1826.

⁷⁵³Walsh, *History of Manufacturing*, ANU, p. 89, from Police Magistrates' Returns of Mills and Manufactories.

⁷⁵⁴Humble Memorial of Michael Byrne to the Colonial Secretary, 6 November 1823, AONSW, Col. Sec. 4/1834A No. 52A (F3061). In May 1825, he was seeking a portion of land in Bargo and proposed establishing an inn, see Memorial of Michael Byrne, May 1825, AONSW, Col. Sec. 4/1840C No. 101 (F3122).

⁷⁵⁵Memorial of Michael Byrne of King Street corner of Pitt Street Sydney to Lieutenant-Governor Stewart and the Council, 6 December 1825, AONSW, Col. Sec. 4/1789, pp. 32-32b; Samuel Bate, Excise Chamber to the Lieutenant-Governor, 7 December 1825, AONSW, Col. Sec. 4/1789, p. 31a.

⁷⁵⁶Memorial of Michael Byrne, May 1825, AONSW, Col. Sec. 4/1840C No. 101 (3122). His address is 19 Pitt Street.

which can be linked to the industry today. Daniel Cooper's Australian, firmly established in 1824, and John Terry Hughes's Albion, established in 1828, were major concerns until the early 1850s, when the Australian was taken over by Tooth, and the Albion was converted to a soap and candle manufactory, the site eventually becoming the location of the Tooheys brewery.⁷⁵⁷ Tooth and Tooheys would come to dominate the New South Wales beer market until the 1980s when they were taken over by two brewing groups which today, allowing for a further takeover, dominate the Australian beer market. By contrast, these new brewers in the 1820s were largely unrelated to the first generation of brewers. For Walsh, who had marshalled evidence which suggested brewing was an immature, small-scale, intermittent and rural activity in 1821, it seemed that a transformation occurred in the 1820s.

But as discussed in previous chapters, brewing by 1821 was a successful and quite sophisticated part of the colonial economy. This conclusion is clearly at odds with the view that brewing was an unimportant activity until the mid- or even late nineteenth century. And it is at odds with the more perceptive view that brewing was established as an industry of consequence in the 1820s. This chapter shows that brewing in 1830 was not greatly different in its fundamentals or its success to the industry in 1820. The quantity of beer produced only kept pace with population growth until very late in the decade. The size of breweries did not dramatically increase. Indeed, no brewery in the late 1820s was bigger than Squire's in 1820. And there were no sweeping changes in brewing practice, so that colonial brewers continued to be the object of strong criticism from some quarters over the quality of their product. But, as argued in Chapter 6, such criticism a decade before, while undoubtedly having an element of truth, in no way altered the conclusion that brewing was a well-established and remarkably modern industry. This conclusion was equally true in 1830.

⁷⁵⁷Walsh, *History of Manufacturing*, ANU, pp. 89-92.

Brewing in the 1820s

The brewing industry was not transformed in the 1820s, but continued to develop largely along established lines. Unsurprisingly, the industry in New South Wales remained almost entirely in the old settlements and, in particular, in Sydney. By 1829, all six licensed breweries were located in Sydney and Ryde, although the first halting steps beyond the Cumberland Plain were taken in the 1820s. In Tasmania, commercial brewing became firmly established, where no industry to speak of had previously existed. Hobart in 1830 was the second centre of brewing in Australia, serving the Tasmanian market, selling to Sydney, and with considerable hopes of exporting to India and elsewhere.

The Sydney Brewers

In 1828, *The Australian* published a list of the major Sydney brewers with their average monthly output (see Table 7.1). It is the first precise record of beer production in New South Wales and, while incomplete, provides an invaluable snapshot of the industry in the late 1820s.

T. W. Middleton was not one of the seven identified licensed brewers in 1821, but it seems most likely that he had begun brewing late in that year. Like many colonial businessmen, he had other interests, and held land, including an additional grant of 200 acres received on 7 September 1821.⁷⁵⁸ His brewery, whilst small, was a success. In 1825, he thanked the public for their custom at his Nelson Brewery in Tank Street, Sydney, 'which he feels assured is due to him, from the wholesome Quality of his BEER', sold at a price as low as any competitor. In line with common business practice at the time, Middleton received payment in kind; and like all brewers, he had yeast for sale, at 4d per

⁷⁵⁸Colonial Secretary to T. W. Middleton, AONSW, Col. Sec. 4/3504, p. 332. This is in response to a memorial dated 3 July 1820.

quart.⁷⁵⁹ The following year, he announced that he had 'received a considerable supply of very fine Kentish Hops invoiced at such a Rate as will enable him to continue the Sale of his Beer at the usual Price of One Shilling and Sixpence per Gallon'.⁷⁶⁰ In 1828, Middleton's brewery was producing 30 hogsheads a month.

Another new brewer in 1821 was Daniel Cooper, who had taken out a licence in association with William Hutchinson. Cooper and Hutchinson were partners in the Lachlan and Waterloo Company, with interests in flour-milling, and later in retailing and banking.⁷⁶¹ This may have been a false start as a brewing licence is not recorded for Cooper and Hutchinson in 1822.⁷⁶² The operations of the brewery are unreported until late 1824 when Daniel Cooper, owner of the Australian Brewery in George Street, advertised for business, selling 'Beer of the first quality, in which the best English and colonial hops are plentifully used and which he will pledge himself to be a strong, sound, and most wholesome beverage, as well for the use of families as publicans'. Payment could be made in Spanish dollars, at 5s each, or in a wide range of goods at market prices, including land, grain, poultry, cheese, seal skins, candles and shingles.⁷⁶³ The *Gazette* remarked that 'this liberality upon which the Australian Brewery is conducted... cannot but ensure the marked patronage of the Public'.⁷⁶⁴

On 16 February 1825 the co-partnership of the Lachlan and Waterloo Company was dissolved by mutual consent of the surviving and continuing partners: Cooper, Hutchinson and Samuel Terry. Cooper and Solomon Levey bought it out and assumed all debts.⁷⁶⁵ Just prior to this announcement, Cooper

⁷⁵⁹SG, 29 December 1825; 19 January 1826.

⁷⁶⁰SG, 22 April 1826.

⁷⁶¹In SG, 14 April 1821, an advertisement for the Lachlan and Waterloo Flour Mills stated at length that the six partners were only in the business of milling. The Waterloo mill had been started in 1820 by Hutchinson and Samuel Terry. The partnership expanded, was styled a company, and began expanding its interests (see Paul Edwin Le Roy, 'Hutchinson, William', ADB, vol. 1, pp. 574-5. The business was sometimes called simply the Waterloo Co., or Hutchinson, Terry and Co.

⁷⁶²Wentworth Family Papers, ML, A765, pp. 502-4.

⁷⁶³*The Australian*, 14 October 1824.

⁷⁶⁴SG, 28 October 1824.

⁷⁶⁵*The Australian*, 17 February 1825. The other three partners had dropped out, including William

had advised that he was 'about to relinquish' his business in George Street, with the usual call to those in debt to him to come forward, and with a notice to the public that he would be selling his stock on hand 'at very reduced prices'.⁷⁶⁶ In early 1826 he announced that he had 'declined' his brewery in George Street.⁷⁶⁷ 'As a condition of their partnership, both Cooper and Levey disposed of individual business interests that conflicted with those of the new firm.'⁷⁶⁸ Cooper and Levey went on to great success in shipping and retailing. Cooper's brewery was bought by John Wright, who had been a licensed victualler for six years before becoming a common brewer. Wright announced that his first brew was ready for delivery in March 1827. As well as supplying retailers in the Sydney market, he would be delivering to the Hawkesbury using 'his own conveyance'.⁷⁶⁹ The *Gazette* reported in 1828 that Mr Wright's brewery in George Street 'has, for a long time past, been producing very good table beer'.⁷⁷⁰ The public certainly thought so: by 1828, the Australian was the second biggest brewery in Sydney, selling 115 hogsheads a month.

Matthew Bacon had taken out a three month licence in the fourth quarter of 1822.⁷⁷¹ By mid-1823, he and his partner John Payne were advertising for barley from New South Welsh producers for their Wellington Brewery, located at 80 George Street.⁷⁷² Bacon and Payne preferred to use the 'superior' grain of Van Diemen's Land but were willing to receive local grain as their stocks were nearly expended. They would pay 'at the average Market Rate, in Barter for Shop Goods, at Ready Money price'. The same *Gazette* carried an advertisement for Bacon's shop at No. 2 York Street, to be leased for a term of three years. Bacon was declining his retail business 'in consequence of the multiplicity Business he is

Leverson, who had died in 1824 (SG, 15 April 1824).

⁷⁶⁶Notice dated 17 January 1825, in *The Australian*, 17 February 1825.

⁷⁶⁷SG, 4 March 1826.

⁷⁶⁸J. W. Davidson, 'Cooper, Daniel', ADB, vol. 1, pp. 245-6.

⁷⁶⁹*The Monitor*, 16 March 1827.

⁷⁷⁰SG, 10 September 1828.

⁷⁷¹Colonial Revenue Accounts 1822-24, Wentworth Family Papers, ML, 3726X.

⁷⁷²SG, 7 August 1823.

engaged in'. It may reflect this 'multiplicity' of business that on New Year's Day 1824 Bacon and Payne announced that Edward Westbrook had taken over the management of their brewery, with power to enter into contracts and make payments on their behalf.⁷⁷³ Certainly, Bacon and Payne were under some sort of pressure. On 9 July, they announced the dissolution by mutual consent of their partnership, with the brewery to be operated solely by Payne in the future. Payne undertook to pay all debts, and was to receive all monies owed to the business.⁷⁷⁴ Their parting did not go smoothly with both men disputing in public the nature of two promissory notes totalling £520 9s 6d given in payment for various goods sold to Payne.⁷⁷⁵

After this hiccup, Payne appears to have done well, selling his own ale as well as imported spirits and beer, including Charrington's best English Ale, and Taylor's superior London Porter.⁷⁷⁶ On 18 August 1826, Payne announced a reduction in the price of his beer, to £4 10s a hogshead.⁷⁷⁷ The following March, the price of his colonial beer was reduced by a further 10s. At the same time he announced his new premium line – 'fine colonial brown stout' – which would be fully matured and ready for delivery in a week to ten days at £5 a hogshead.⁷⁷⁸ On 26 June, he announced a further reduction in the price of his strong beer to £3, with a 'corresponding reduction' in the price of his brown stout, which may have brought it to £3 15s.⁷⁷⁹ Attention to quality and price made Payne the largest brewer in the colony in July 1828, with sales of 130 hogsheads a month. Shortly after, however, he was in financial difficulty. He assigned all of his estate and effects to trustees, creditors were requested to furnish him with details, and he in turn requested those in debt to him to pay in promissory notes or face legal

⁷⁷³SG, 1 January 1824.

⁷⁷⁴SG, 22 July 1824.

⁷⁷⁵*The Australian*, 20 January 1825; reprinted 27 January.

⁷⁷⁶SG, 15 December 1825; 1 and 11 March 1826; 26 April 1826.

⁷⁷⁷*The Monitor*, 3 November 1826.

⁷⁷⁸*The Monitor*, 16 March 1827.

⁷⁷⁹*The Monitor*, 20 September 1827.

action.⁷⁸⁰ These arrangements were sufficient to keep the Wellington going until about 1834.⁷⁸¹

A change in the retail licensing regulations brought T. Wilson into the brewing business. In 1826, Governor Darling directed that prisoners holding tickets of leave were not to be licensed as publicans. His reasoning was that the ticket-of-leaver who had been employed in agriculture or some other 'well conducted Establishment' had the best chance of acquiring habits of industry and becoming a useful member of the community, while he who depended on his ingenuity, or set up a public house, 'generally (it may be said almost invariably) falls into a Course of Vice and Dissipation, as detrimental to the Public, as it [is] ruinous to himself'.⁷⁸²

Some attempted to circumvent the regulation. B. Levey of George Street advertised a scheme to 'those unlucky Persons who may have lately been deprived of their Licenses as Publicans, without any particular fault of theirs'. While barred from selling retail, there was no restriction on their selling wholesale, defined as amounts of five gallons or over. Sell in bulk and sell cheap, was Levey's message, and he undertook to provide wine at 5s a gallon and porter at £9 a cask (probably a hoghead) to those ex-publicans contemplating moving into supplying householders in bulk.⁷⁸³ Wilson was one victim of Darling's policy, but chose a different response to that advocated by Levey. In 1825, Wilson was operating the Hole in the Wall in Pitt Street, selling spirits and wine by the gallon, as well as other goods, and also selling alcohol over the counter.⁷⁸⁴ Following Darling's declaration, the Hole in the Wall, with brewery attached was put up for lease 'on account of his [Wilson's] not being able to obtain a Licence,

⁷⁸⁰SG, 8 September 1828.

⁷⁸¹Walsh, *History of Manufacturing*, ANU, p. 89.

⁷⁸²SG, 18 March 1826. This was an explanation of the policy which had been introduced earlier in the year. Darling was enforcing a restriction which had applied at times during Macquarie's governorship, see Phillips, *Colonial Autocracy*, p. 65.

⁷⁸³SG, 11 March 1826; repeated in later issues.

⁷⁸⁴SG, 15 and 29 December 1825.

on account of only holding a Ticket of leave'. It appears that Wilson had been operating as a small-time brewing victualler. Unable to continue in this fashion, Wilson became a common brewer instead, an activity to which the restriction on ticket-of-leavers did not apply. It is not known whether he leased the Hole in the Wall and moved to other premises, or operated his brewery from these premises when they failed to let, but by July, his Gas Light Brewery was open for business. Wilson advised the public 'that, having laid in a large Quantity of the best KENTISH HOPS, he is enabled to Sell the best COLONIAL BEER; at £3 5s per Hogshead'.⁷⁸⁵ This was below the price of competitors such as Middleton who charged £4 1s, and may well have prompted Payne to reduce his price to £4 10s in August. If so, Wilson may have regretted starting the price war which saw Payne reduce the price of his strong beer to £3 by June 1827. In 1828, Wilson was, with Middleton, the smallest of the six brewers listed by *The Australian*, selling 30 hogsheads a month.

Of the third largest brewer on the list – Buckton – we know very little other than his output of 100 hogsheads a month, and that he brewed 'some good stuff' and was, in mid-1828, 'buying up whatever barley he can lay hands upon just now, for the purpose of malting'.⁷⁸⁶ Of Salter we know nothing other than his output in 1828 of 60 hogsheads a month. Nor is the list complete. As *The Australian* noted, it had 'not been favoured with the quantities of pale ale brewed by Messrs Mackie and Dickson, but should be disposed to consider them very considerable'. Dixon and Co., as the *Gazette* called the business, appears to have commenced in 1826, and made ale 'we understand from various quarters, not at all inferior to the best Edinburgh ale', a great compliment indeed, as Edinburgh's pale ales were noted for their quality, owing much to the local water which was rich in mineral salts.⁷⁸⁷ The *Gazette* had great hopes for the newcomer. When brewed extensively 'and the supply can be made to equal the demand, it is likely

⁷⁸⁵SG, 19 July 1826.

⁷⁸⁶*The Australian*, 20 June 1828.

⁷⁸⁷Protz, *Beer*, p. 15.

to prevent altogether the further importation of Scotch and English ales'.⁷⁸⁸ By 1828, Dickson and Co.'s Steam Engine Brewery was one of the largest breweries in Sydney, to be compared with Payne's, Wright's and Buckton's, rather than with Salter's, Wilson's and Middleton's. As the name suggests, it used steam power. John Dickson had brought the first steam engine to the colony in 1813, and was the first to apply steam power to flour milling (in 1815) and brewing (in 1826).⁷⁸⁹ The Steam Engine 'brewed from malt and Hops only'. It produced 'Fine bright and fragrant Beer, 1s 6d per gallon, or £4 per hogshead' and 'Potent, lively, brisk, pale Ale, of very superior quality, £6 per hogshead'. The *Gazette* declared that its 'Australian ale is getting more and more into repute. London porter and Hodgson's pale ale are completely "knocked on the head" by the success of this patriotic enterprise'.⁷⁹⁰

There were also two significant entrants in the second half of 1828, after the July article in *The Australian*. Collicott started up his brewery in Upper Castlereagh Street in 1828, and appeared 'to understand his lately adopted profession'.⁷⁹¹ In October, the *Gazette* commended Collicott, Dickson and Mackie, and Wright, for the quality of their beer, 'which, after remaining a proper time in bottle, almost equalled the far-famed *pale ale* of HODGSON'.⁷⁹² This was a serious compliment, indeed, as the use of capital letters indicates. George Hodgson, of Abbot & Hodgson's Bow Brewery in London, pioneered the 'India Ale' trade, which was taken up with great success by Allsopp and Bass breweries in Burton upon Trent in the 1820s. A generation later, Calverly would include Hodgson in the pantheon of British brewers, in his famous poem, 'Beer':

O Beer! O Hodgson, Guinness, Allsopp, Bass!

Names that should be on every infant's tongue!⁷⁹³

⁷⁸⁸SG, 31 January 1827.

⁷⁸⁹Linge, *Industrial Awakening*, pp. 81-2

⁷⁹⁰SG, 10 September 1828.

⁷⁹¹SG, 10 September 1828.

⁷⁹²SG, 31 October 1828.

⁷⁹³*The Complete Works of C. S. Calverly*, George Bell and Sons, London, 1902, p. 26. The poem

The other newcomer was John Terry Hughes, whose Albion Brewery would be the biggest brewery of its day. The dissolution of the original partnership of the Lachlan and Waterloo Company in 1825, and Daniel Cooper's subsequent partnership with Solomon Levey, led Cooper to decline the brewing business in early 1826. At the same time, one of Cooper's former partners, Samuel Terry, moved into the industry. Dubbed 'the Rothschild of Botany Bay', Terry had a range of successful business interests including farming, flour-milling, property development and finance. In mid-1826 he laid the foundation stone of what was clearly to be 'a most extensive building, at the extremity of Upper Elizabeth Street, near the Burying Ground, intended, as we believe, for a Brewery'.⁷⁹⁴ The brewery was grandly conceived, and its long and careful progress was the subject of considerable interest among the people of Sydney. 'This brewery has silently raised its head at the outskirts of the town, and now presents to view an immense pile of buildings.' Further to the plan,

Mr Terry has imported, per Elizabeth, a capacious boiler capable of containing one thousand gallons of liquor. He has also imported several pockets of hops; and the acres of barley which he raised this season, are to be immediately converted into malt.

Terry promised not only to produce on a large scale but to a high standard, with 'London Porter' and 'English Ale' 'to please the palate of connoisseurs' and of those who would only drink 'English, Scotch, and Welch' beer.⁷⁹⁵ By May 1828, the completion and running of this 'elegant and spacious brewery' had passed to Terry's nephew, John Terry Hughes.⁷⁹⁶ The Albion Brewery opened at the end of

was written around 1860. For a discussion of Hodgson and India ale, see Protz, *Beer*, pp. 213-5, and Gourvish and Wilson, *British Brewing*, p. 90, who quote a disparaging contemporary opinion of Hodgson's beer.

⁷⁹⁴*The Monitor*, 26 June 1826.

⁷⁹⁵*The Australian*, 25 April 1827.

⁷⁹⁶SG, 16 May 1828. Hughes had also married Terry's step-daughter, Esther Marsh (Gwyneth M. Dow, 'Terry, Samuel', ADB, vol. 2, pp. 508-9.

the year. Its operator claimed practical experience in the business, and again promised to produce on a large scale, from malt and hops only.⁷⁹⁷ The Albion's 'good MALT BEER' sold at £3 10s a hogshead; private families could be accommodated with kilderkins of 18 gallons at 1s 9d per gallon. Yeast was supplied at any time and grains two days a week.⁷⁹⁸ By 1830, the Albion was selling its beer to Launceston in northern Tasmania, causing the Gazette to exclaim: 'New South Wales beer selling in Van Diemen's Land!'.⁷⁹⁹

There were other brewers in Sydney of an unknown size. Thomas Clarkson, for some years a publican, baker and maltster, received a brewing licence in 1822, after erecting 'at a considerable expense and on an extensive scale, an Establishment in order to Brew Beer, and which from his knowledge of the Business he judges himself to Produce of a very superior quality'.⁸⁰⁰ At the end of 1823, a teacher, Richard Archbold, of Charlotte Place, announced that he had commenced in the brewing business, with 'upwards of Six Thousand Gallons of Beer' for sale in casks of any size to private families and 'Persons in the Trade'. Like all brewers, he had fresh yeast and spent grains for sale. He brewed from both barley and maize.⁸⁰¹ This was one of the shortest lived breweries in the 1820s. By August 1825, Archbold was back to his old 'honourable Profession', announcing the opening of his new school, including a boarding house.⁸⁰² An unnamed brewery in Pitt Street in 1829 was brewing 'a fine description of beer' made from malt and hops only.⁸⁰³ This was probably Barker and Co.'s recently opened Union Brewery.⁸⁰⁴

⁷⁹⁷SG, 7 November 1828.

⁷⁹⁸SG, 19 November 1828.

⁷⁹⁹SG, 19 January 1830.

⁸⁰⁰Memorial dated 13 February 1822, Wentworth Family Papers, ML, A765, p. 129 (CY 727, p. 488).

⁸⁰¹SG, 30 October 1823.

⁸⁰²SG, 25 August 1825.

⁸⁰³SG, 22 September 1829.

⁸⁰⁴*The Sydney Monitor*, 31 October 1829. This advertisement identifies the Union in Pitt Street.

The Sydney breweries continued to provide most of the colony's output of beer, and brewing outside Sydney continued to be precarious in the 1820s. The great exception to this in the 1810s had been Squire's at Ryde. As noted above, Squire's continued to operate for most of the 1820s, and was probably still one of the largest breweries in the colony, even if the son and son-in-law were less determined and successful than Squire senior. In Parramatta, Ann Curtis's pub brewery operated for a year or two at most, and Joseph Hickey Grose sought a licence as a common brewer in 1822. In his petition, he identified himself as a brewer by profession, who 'under the immediate patronage of His Excellency Governor Macquarie has erected certain premises and utensils suitable to his occupation'.⁸⁰⁵ Grose supplied yeast to the prisoners' barracks at Parramatta, and in 1824 won the Agricultural Society prize for beer.⁸⁰⁶ Despite the judges's praise, Grose went out of business within the next few years.

Windsor continued to be a brewer's graveyard. George Kable renewed his brewing licence in 1822, advising that 'now being unemployed', he intended 'to devote his whole time and attention to this business'.⁸⁰⁷ There were two other applicants to the Windsor magistrates in the same year. Robert Fitz in Windsor was one, 'being about to erect the necessary buildings to carry on a Brewery in this town, and considering that an establishment of this kind would be beneficial to the inhabitants of these Districts'.⁸⁰⁸ Benjamin Singleton at Kurrajong, fourteen kilometres west-north-west of Windsor, was the other. He wished 'to enter into the Brewing Business' and considered 'his situation well adapted to

⁸⁰⁵Memorial dated 11 February 1822, Wentworth Family Papers, ML A765, p. 115 (CY 727, p. 474).

⁸⁰⁶AONSW, Col. Sec. 4/424, pp. 214, 320; SG, 14 October 1824. The prize for beer was subsequently dropped. See also Louise T. Daley, 'Grose, Joseph Hickey', ADB, vol. 1, pp. 490.

⁸⁰⁷George Kable to the Windsor Court, 16 February 1822, Wentworth Family Papers, ML, A765, p. 133 (CY 727, p. 492).

⁸⁰⁸Memorial dated 9 February 1822, Wentworth Family Papers, ML, A765, p. 109 (CY 727, p. 468)

carrying on the same'.⁸⁰⁹ Neither was granted a licence. Despite being the only brewer in Windsor, and despite his greater attention to the business, Kable did not renew in 1823.⁸¹⁰ Brewing was an even less successful activity in Liverpool. Located about fourteen kilometres south-south-west of Parramatta, Liverpool was the last of the main settlements in the County of Cumberland to be established and the last to get a brewery. William Love appears to have established his pub brewery at the end of 1823. Having sunk his life savings and borrowings of £25, he sought time to pay his brewing and beer vending licences for 1824, totalling £30. His problem was added to by unpaid debts owing to him of £55.9.9 and 'the restricted sale (under peculiar circumstances)' of his beer, about which he does not elaborate.⁸¹¹ It is unlikely that the magistrates, who had refused applications by Singleton and Fitz, were sympathetic to Love's plea.

By 1829, all six brewers in New South Wales held licences granted by the Sydney Bench of Magistrates, which included Ryde.⁸¹² This brought to a conclusion the concentration of the industry which had begun twenty years before. The 1820s, however, saw the first, tentative steps towards establishing the industry outside of the County of Cumberland. The pattern of settlement was northwards from Sydney to the Hunter, westwards to Bathurst, south-west along the southern highlands, and southwards to the Illawarra. The populations of these new settlements in 1820 were small. The largest was Newcastle with 900 inhabitants, of which 700 were convicts, beyond which were a score of small farms on the Hunter River flats.⁸¹³ The other districts were very sparsely populated, and small towns of some consequence would not appear until the end

⁸⁰⁹Undated memorial, Wentworth Family Papers, ML, A765, p. 182 (CY 727, p. 542). Singleton's application is noted in the list of applications for 1822, ML, A765, pp. 143-5 (CY 727, pp. 502-4).

⁸¹⁰The Colonial Fund accounts show only one licence in Windsor in 1822 and none in 1823 (SG, 30 January 1823, 8 January 1824).

⁸¹¹William Love to the Worshipful Bench of Magistrates Liverpool, 23 February 1824, AONSW, Col. Sec. 4/1778, pp. 90-90c.

⁸¹²Blue Book, 1829, PRO, CO 206/70 (AJCP 1170).

⁸¹³Robinson, 'Land', p. 81.

of the decade. Nevertheless, in 1822, John Jones of Windsor decided to re-enter the brewing business at his new property at Bathurst, 205 kilometres west of Sydney, over the Blue Mountains. He expressed great hopes of abundant grain yields in the area and planned to start a hop plantation as soon as possible. Given the small population in the district and the risk attached to the venture, he also asked for exemption 'for a limited time' from the brewing licence.⁸¹⁴ The result of his application is unknown, but it probably came to nought.

In 1825, Thomas Scarr was seeking to established himself in a small way as a brewer in Newcastle, 150 kilometres to the north of Sydney. In a letter to the Colonial Secretary he recalled a promise of 'a grant to build a Brewery upon'.⁸¹⁵ Scarr had petitioned the Governor on 29 December 1824 'for permission to proceed to some settlement for the purpose of carrying on his trade of a Brewer'. He had been 'bred to that Business' and consequently had a thorough knowledge of it, 'but the Competition of Sydney is too great to allow Petitioner the most distant chance to make a support for his family, and having learned that no person of that calling exists at Newcastle', he asked permission to proceed thence.⁸¹⁶ Again it is unlikely that the venture came to much. Colonial beer was already being sold in Newcastle through a beer shop operated by a Mr Smith in 1823.⁸¹⁷ The competition Scarr sought to escape was already moving into Newcastle.

In his 1829 pamphlet, James Atkinson wrote of the particular problems of brewing in the interior: the want of suitable timber to make casks, and the high costs of transportation, which made hops expensive to the brewer and worked against the sale of country-made beer in Sydney.⁸¹⁸ These were curious criticisms. Cartage on a pocket of hops was a small part of the cost of producing

⁸¹⁴Memorial of John Jones, Windsor, to the Commandant at Bathurst, 13 April 1822, AONSW, Col. Sec. 4/1830 No. 199 (F3048).

⁸¹⁵Thomas Scarr, Brewer, Newcastle, to the Colonial Secretary, 21 November 1825, AONSW, Col. Sec. 4/1812 pp. 123-123a.

⁸¹⁶The Humble Petition of Thomas Scarr to Governor Brisbane, 29 December 1824, AONSW, Col. Sec. 4/1811, pp. 207-207b.

⁸¹⁷Police Fund accounts for the fourth quarter of 1823, SG, 24 February 1825.

⁸¹⁸Atkinson, *Distilling and Brewing*, pp. 18-9.

beer in the country, and rural brewers were not looking to supply the Sydney market, but rather to supply a local market, in which endeavour they were assisted by the high cost of transporting bulky goods such as beer from Sydney. Despite his concerns, Atkinson felt that 'as beer is much wanted for domestic consumption, the practice of brewing, it is probable, will soon become very common in the interior'. By 1830 Atkinson himself had established a malt house, hop field and brewery at Oldbury near Berrima in the southern highlands, about 120 kilometres south-west of Sydney. He expected 'to brew enough for the supply of his neighbourhood' and anticipated 'his example being followed at Bathurst and other interior settlements'.⁸¹⁹ Atkinson's venture was short-lived, but a brewery was established in Bathurst in 1831, and other country breweries followed, including the extant and recently revived Goulburn brewery, established in 1836, 200 kilometres south-west of Sydney.⁸²⁰ Breweries would also be established in Port Phillip in the 1830s. But the rise and fall of country brewing, and the establishment of brewing in the new colonies, take us well beyond the scope of this study.

Tasmania

The fledgling brewing industry in Tasmania, which Bigge's reports describe, developed considerably in the 1820s in response to the rapid population growth from 5,500 in 1820 to over 24,000 in 1830. Hop growing grew apace, although local breweries relied heavily on imported hops into the 1830s.⁸²¹ As in New South Wales, the development of brewing was not particularly reliant on the development of a local hop industry. More important was the great increase in

⁸¹⁹John Jamison, Presidential Address to the Agricultural and Horticultural Society of New South Wales, SG, 12 and 19 October 1830.

⁸²⁰The Bathurst brewery only produced for two years and then closed (Blue Books, 1831, 1832, PRO, CO 206/71-2 (AJCP 1170)).

⁸²¹Pearce, *Hop Industry*, pp. 25-8.

grain production, which was reflected in the growing export of grain to New South Wales from the late 1810s.⁸²²

The number of breweries in Tasmania increased from 3 in 1824 to 11 in 1830.⁸²³ Licensing arrangements similar to those in New South Wales were introduced. Applications for licences were made to the Bench of Magistrates, with brewing licences costing £25 and beer retail licences costing £5. With barely half the population of New South Wales in 1830, Tasmania had nearly twice the number of breweries. Partly, this was a reflection of geography. Launceston was 200 kilometres north of Hobart and was a quite distinct market. Even settlements such as New Norfolk and Pitt Water were more than 30 kilometres from Hobart. All had breweries during the 1820s.⁸²⁴

Little is known about the output of these breweries, but *The Colonial Times* spoke enthusiastically of the quality of two of them.

Some time since, in speaking of Dudgeon and Co.'s Colonial ale, we suggested that it would be a great deal better, by being a little older, and a little stronger. This we find now to be the case. The recent arrivals of good hops, and the improvement made in the manufacture of malt, has rendered the Hobart Town ale quite another thing. We tasted some the other day, at the Commercial Tavern, on the Wharf, which really surprised us. In a word, it was so exceedingly strong and pleasant, that we are convinced were its qualities generally known not one drop of English porter would be drank in Van Diemen's Land.⁸²⁵

⁸²²Bigge, *Agriculture and Trade*, p. 54, Hartwell, *Van Diemen's Land*, p. 134.

⁸²³Statistical Returns of Van Diemen's Land, 1824 to 1839 (ABS, *Colonial Statistics 1804-1901*, microfilm).

⁸²⁴*The Tasmanian Almanack*, 1825, p. 52.

⁸²⁵6 July 1827, quoted in SG, 20 July 1827.

A year and half later, the *Times* complained that 'little Colonial beer is now manufactured, to what formerly used to be', while so much English porter at £9 to £10 pounds a hogshead was being imported. As the barley harvest was abundant, English hops were freely available at 2s 6d per pound by the pocket, and local hops were selling at 3s per pound, it 'hoped soon to see our several breweries once more in active operation'.⁸²⁶ The *Times* appears to have been alarmist. As in New South Wales, there was an imported beer boom in Tasmania in the late 1820s, with about five gallons per head being imported in 1828.⁸²⁷ But colonial beer probably retained the larger share of the market. G. M. Goodridge offered a very different account to the *Times*. 'The only fault that can be found with the [local] ale or beer, is, that in consequence of the proprietors not being fully able to meet the demand, it is sold and consumed before it is old enough.'⁸²⁸

The Business and Practice of Brewing in the 1820s

In 1826, Cunningham wrote of 13 breweries in New South Wales producing 8,000 hogsheads of 'wholesome' 'ale and beer' 'from our various descriptions of colonial grain'.⁸²⁹ This gives an average consumption of 11.1 gallons for the 38,890 people in New South Wales. (Conversions for the latter part of the 1820s assume that ale and beer hogsheads had become the same size, at 54 ale gallons, see Table A2.1.) The six breweries in *The Australian's* list were producing 7.5 gallons for each of New South Wales's 40,069 inhabitants in 1828. But this is a considerable underestimate as it leaves out Dickson and Mackie's in Sydney and

⁸²⁶*The Colonial Times*, 16 January 1829, in SG, 12 February 1829.

⁸²⁷Van Diemen's Land Blue Book, 1828 (ABS, *Colonial Statistics 1804-1901*, microfilm). This has the landed value of malt liquor imports as £9,123. At £5 per hogshead, this is roughly 1,800 hogsheads for 18,000 inhabitants. These figures are consistent with the landed value of beer in Sydney and per head figures for beer imports for New South Wales at the time.

⁸²⁸*Statistical View of Van Diemen's Land* [1830], quoted in Hartwell, *Van Diemen's Land*, p. 149.

⁸²⁹Cunningham [*Two Years*, vol. II, p. 74].

Squire's at Ryde, both of which are likely to have been larger than the average size. Including these would take the production of local beer to about 11 gallons.

The coming on stream of the Albion at the end of 1828 compensated in part for the loss of three smaller breweries in 1829 (see Table 4.1), although it is quite possible that colonial brewing suffered from the huge increase in alcohol imports in 1828-9 (see Table 1.1). Beer imports rose from 78,165 gallons in 1826 and 81,315 gallons in 1827 to 194,750 gallons in 1828, before peaking in 1829 at 238,418 gallons or 5.8 gallons per New South Welshman. Wholesale prices for imported beer were at the lower end of the range of £9-12 per hogshead which had been charged in 1821.⁸³⁰ And while premium local beers such as Payne's stout and Dickson's pale ale sold at £5 and £6 per hogshead respectively in 1827 and 1828, the bulk of colonial beer sold in the range of £3-4, and there had recently been a round of price cutting. The most likely cause for the increased consumption of imported beer was an increase in incomes leading to the substitution of superior imported beer for the inferior domestic product. This is a problematic explanation as the late 1820s is generally regarded by historians as a time of depression. A financial crisis in Britain led to lower prices for Australian wool and a decline in British investment in 1827. This coincided with the beginning of a severe drought which lasted until 1830. On the other hand, the area of land in productive use continued to rise and the size of the wool clip nearly doubled from 1826-30. Commonly used estimates of Gross Domestic Product, when added to population estimates suggest that GDP per head rose by nearly a quarter from 1826 to 1830.⁸³¹ It is therefore difficult to explain the increase in consumption by reference to the state of the economy. Rather, the huge rise in

⁸³⁰Levey had been selling at £9 in 1826 (SG, 11 March 1826). This had not fallen greatly at the height of the imported beer boom. Taylor's brown stout sold for £8 10s per hogshead in early 1830 (SG, 9 January 1830).

⁸³¹Brian Fletcher, *Colonial Australia Before 1850*, Nelson, Melbourne, 1976, pp. 70-1; Estimates of GDP by N. G. Butlin and W. A. Sinclair, in Vamplew, *Historical Statistics*, p. 128. These estimates are necessarily very imperfect. When added to estimates of population from Table 1.1, the following GDP per head figures are derived: £24 (1821), £26 (1826), £29 (1828), £34 (1830).

imported beer consumption may be another useful indicator in understanding what actually happened in the colonial economy in the late 1820s.

Whatever the cause, beer imports rose dramatically in 1828-9 and may have led to a fall in the consumption of colonial beer. Sometime brewer and self-appointed expert on the local industry, Edward Ferraby, estimated local production at 'upwards' of 100 hogsheads per week (or 6.9 gallons per head) in 1829.⁸³² This is a very broad, minimum figure, which, with imports of 5.8 gallons per head, gives total beer consumption of 12.7 gallons per head. This is the same as in 1826, when the split, however, was 11 gallons of local beer and 2 gallons of imported. Care needs to be taken with these figures. If Ferraby's 'upwards' of 100 hogsheads per week was actually 150 hogsheads, it would mean at most a small fall in local beer consumption to 10.4 gallons per head. Colonial beer continued to be about a third of the price of imported beer and was seemingly gaining in repute. 'Colonial beer has of late taken a great run – some families giving it the preference to London porter, in respect of being wholesome and palatable, and at the same time cheap'. Local beer was 6d a quart compared with 20d for London porter.⁸³³ It is doubtful that colonial production fell to the extent suggested by Ferraby's minimum figure.

There is similar uncertainty about consumption in 1830 and 1831. In his estimates, Ferraby 'assumed' the figure to be 200 hogsheads per week (12.6 gallons per head) in 1830 and predicted it would reach 250 hogsheads per week in 1831. The figure for 1830 was rejected by an anonymous but clearly knowledgeable critic, identified only as 'Candor', who estimated weekly production at 140 hogsheads (9 gallons per head).⁸³⁴ *The Sydney Monitor* of 17 September 1831 put production in Sydney at 300 hogsheads a week and thought the figure would reach 400 hogsheads a week 'after the hot weather begins'. If

⁸³²Letter to John Jamison, July 1830, included in Jamison's Presidential Address to the Agricultural and Horticultural Society of New South Wales (SG, 19 October 1830).

⁸³³*The Australian*, 16 July 1828.

⁸³⁴SG, 28 October 1830.

The Monitor's figures are accurate, the people of New South Wales were drinking at least 18 gallons of colonial beer per head per year, based on an average weekly consumption of 300 hogsheads.

The firmest conclusion that can be drawn from these accounts is that output per head did not change greatly from 1820 to the mid-1820s. It then fell away to some extent in 1829, recovered in 1830, and took off in 1831. Most certainly, the figures do not support the idea that brewing was greatly altered during the 1820s. *The Australian*'s figures show that the largest brewery in 1828 had an output somewhat smaller than Squire's brewery in 1821. In the late 1820s average brewery size increased as smaller breweries in and outside Sydney closed down. In 1826, with 13 breweries in business, average output was 33,231 gallons a year. If the output in 1830 lay between the estimates of Candor and Ferraby, at 170 hogsheads per week (10.7 gallons per head per year), then the six Sydney breweries were each producing 79,560 gallons, comparable with an average size in 1820 of about 70,000 gallons per brewery.

Nothing in the information we have about brewing in the 1820s suggests that the structure of the industry changed significantly. The most obvious feature in 1829 – the location of all six breweries in Sydney-Ryde – was the culmination of a tendency towards concentration which had been observable since 1808 when Rushton moved from Parramatta to Sydney. In this process, the smaller brewers had fallen away. Interestingly, the brewing licence was reduced from £25 to £5 in either the 1825 or 1826 licensing round.⁸³⁵ This may explain the increase in licensed breweries from 10 in 1824 to 13 in 1826. This soon fell, to be 9 in 1828 and 6 in 1829. As pointed out in Chapter 5, the biggest pressure for larger common brewers was commercial not regulatory.

There were changes of course. The beer retailing licence was effectively done away with from 1826 by making it the same price as a general liquor licence. There had been 38 beer shops in 1825 (see Table 5.1). While no doubt an

⁸³⁵Brisbane to Bathurst, 14 May 1825, HRA XI, p. 586.

inconvenience to brewers, the removal of the licence does not seem to have provoked the same reaction as in 1822, suggesting that colonial beer was more readily stocked by general licensees than at the beginning of the decade. Some of the major brewers in the 1820s seem to have been somewhat broader in their interests than the big three in 1820. Like Kinsela before him, and Boston before that, Payne made soap and candles. He also dealt extensively in imported spirits, wine and imported beer.⁸³⁶ His interest in distributing a full range of alcoholic drinks no doubt complemented the distribution of his own range of beers, and may have helped to get his own beer placed with publicans. Dickson and Mackie also made soap and candles, and Dickson milled flour.⁸³⁷ As part of the Terry empire, Hughes had large mercantile interests.⁸³⁸ On the other hand, Cooper sold the Australian because it conflicted with his other business activities, and Wright, who bought the Australian, was primarily a brewer, as apparently were Buckton, Salter, Wilson and Collicott. In the larger, diversified businesses such as Mackie and Dickson, and Hughes, it is likely that the daily running of the brewery was in the hands of an employed brewer, as Bacon and Payne's had been in 1824. This was in contrast to the direct control exercised by Squire, Rushton and Lawrence, and by Wright and some of his contemporaries. A notable technical innovation during the 1820s was the use of steam power in brewing by Dickson and Mackie. It is, however, the broad similarity between the industry in 1830 and 1821 which is most notable and which emphasises the development that had occurred in the first two decades of the century.

The practice of brewing may have changed, although it is hard to say to what extent and whether for better or worse. Criticism of the quality of colonial beer was particularly vigorous in the late 1820s and early 1830s. At first, the *Gazette* took the side of the brewers, praising the efforts of Mackie and Dickson, Collicott and Wright. The problem was the lack of enterprise shown by the

⁸³⁶*The Monitor*, 16 March 1827.

⁸³⁷Jamison, Address, SG, 16 October 1830.

⁸³⁸Gwyneth M. Dow, 'Terry, Samuel', ADB, vol. 2, pp. 508-9.

colony's farmers, who confined themselves to 'the jog-trot of wheat and maize, maize and wheat', when hops were easily cultivated. One or two individuals had turned their attention to the hop, it reported. One, with a dozen or score of acres in hop plants produced an annual profit of £500. But these were exceptions, so that 'The scanty supply which has hitherto been furnished to the market, has been almost exclusively imported from England'. '*Shame on our farmers!*', the *Gazette* declared. Why should the farmers of Kent and the brewers of London benefit, 'when, in our own capital, we can manufacture a beverage far more congenial to the climate than porter and brown stout?'. Its advice was simple: 'By all means, grow hops. They are profitable to the grower, and advantageous to the country'.⁸³⁹ On the matter of barley, the *Gazette* was silent, suggesting that it was happy with brewers relying as they had for many years on their own 'jog-trot of wheat and maize'.

A few months later, the *Gazette* shifted ground. The brewers themselves were partly to blame. 'We have often written articles, with a view to encourage our Settlers to turn their attention to the rearing of hops, and the growth of more barley, whereby our breweries might be assisted.' But the

agriculturalist complains most bitterly some seasons, when he grows barley, that he cannot get a remunerating price for it, and therefore, the following season he turns his attention to the growth of some other grain.

Similar complaints are made by those who have reared hops.

The answer, in the absence of a House of Assembly to act on such matters, lay with the King's representative, who should encourage the production of 'every necessary article of life and clothing within ourselves, to the exclusion of similar

⁸³⁹SG, 31 October 1828.

articles of English manufacture'.⁸⁴⁰ In other words, a protective tariff was the answer.

The *Gazette*'s campaign became more aggressive at the end of 1830. Prompted by an abundant grain harvest, it wondered whether 'it would not be a great benefit to the Colony to prohibit the use of sugar in brewing and distilling'. Using Ferraby's figures, which must have been supplied to the *Gazette* as well as to John Jamison, such a policy would create a demand of 100,000 bushels of grain.⁸⁴¹ While concerned firstly with the welfare of the farmer, the *Gazette* used the occasion to attack the unwillingness of brewers to use barley-malt, the resulting poor quality of the beer produced, and the unfortunate preference of the public for this inferior product.

We are informed by a gentleman of long experience as a brewer, that barley produces in New South Wales from six to twelve per cent. more of saccharine matter than in England; and certainly the sickly stuff now vended in the town as *beer*, is not to be named in the same breath with genuine malt liquor, which the superior properties of our *barley* would enable the brewers to produce at a very cheap rate. The public taste is so deplorably vitiated that some of the more respectable brewers, who were desirous of producing a really good ale or beer from malt and hops, found that for such a beverage there was no sale, and were compelled to have recourse, like the rest of the trade, to the vile sugar-bag. This perversity would, however, be gradually overcome by a perseverance on the part of the brewers, aided by the publicans, in using the legitimate ingredients of this ancient household drink.

⁸⁴⁰SG, 12 February 1829.

⁸⁴¹SG, 21 September 1830. The *Gazette* talks of 200 barrels a week brewed in Sydney, requiring 100,000 bushels of grain to produce. This seems to be a misquoting of Ferraby's estimate of 200 hogsheads per week in 1830, and his prediction of 250 hogsheads per week in 1831, which would require 100,000 bushels of grain annually to produce.

Banning the use of sugar in brewing and distilling would also help.

Ferraby's views received wider currency when his letter to John Jamison was included in Jamison's Address to the Agricultural Society.⁸⁴² Having identified the considerable size of local brewing, Ferraby contrasted the benefits to the farmer and the colony from brewing from barley malt with 'the evil of sending away cash for sugar' from brewing with sugar only. He disagreed with the opinion that the colonial malt was low in saccharine content and dismissed the argument that the climate worked against brewing from barley-malt. In regard to the latter, he pointed to his own success in brewing from malt and hops only for four months in 1829. Finally, he rejected the view that if malt worked as well as sugar, 'it would be adopted without legislative enactments'. In England, he argued, if sugar were allowed not one fourth of malt would be consumed. The same prohibition against sugar should apply in the colony. Jamison rejoiced in 'the increasing taste for Colonial beer' which the 'scale of consumption establishes' and hoped that the Governor would 'promptly bring an Act before the Colonial Legislature imposing a duty on beer brewed from sugar'.

The views of Ferraby brought a thundering reply from 'Candor'.⁸⁴³ Jamison called Ferraby 'an experienced Colonial brewer', but Candor did not agree. Ferraby's statement

contained a very erroneous and incorrect account of sugar used for that beverage, and had the gentleman who wrote it acquired the experience he professes in the colony, he could not conscientiously have trumped up the fictitious and misrepresented story he has done.

Beer was not brewed entirely from sugar. Rather, sugar was an invaluable adjunct which made colonial brewing possible.

⁸⁴²The entire speech was reprinted in SG, 12, 14, 16, 19 and 21 October 1830.

⁸⁴³SG, 28 October 1830.

That the *barley* itself would not produce a beverage, *however well malted*, equal to that of England, many reasons may be adduced, but the most essential is, the *vegetative growth* being so much *quicker* here, reduces the *saccharine matter* and alters the flavour. That we have never yet grown a sufficiency of that article is a mere subterfuge.

Both distillers and brewers had found difficulty with colonial barley, among them, the proprietor of the Albion brewery, who had spent a considerable amount of money vainly trying to brew from malt only.

Several other brewers have met with the same disappointment; some of these persons were men of years and experience, and did not readily relinquish their endeavours to brew good brew, like our friend Mr Ferraby, who almost forgets that *he quitted the busy scene of his toils at the end of his first year*.

Despite Candor's scathing reply, the quality of colonial beer remained a contentious issue. *The Sydney Monitor* of 17 September 1831 put the case against the local product in the bluntest terms. No one in the colony had brewed beer to compare with British beer, and 'the high-flown praises that have been bestowed on the beers hitherto brewed in the Colony, have... been greatly exaggerated'. Sydney's breweries were large, but their beer was made entirely from sugar and water, and was 'drawn out of the vat to-day, and tomorrow may be seen at the taps of all the public-houses in Sydney'. Like the *Gazette*, it could only express exasperation and contempt that 'the newer it is, the better the Sydney folks like it, because it is the sweeter'. That the brewers found the use of sugar advantageous in production, and that the people liked the result, should be set aside in favour of the good of the colony and its farmers, contrary to the views of 'certain free-trade theorists'. The *Monitor*, however, opposed the government's decision to place a

duty on imported sugar and beer made from sugar, a policy which had been urged by John Jamison and 'his man Friday, who wrote his memorial for him' (presumably, Ferraby). The duty on sugar 'would affect all of the colony' but would not prevent the brewing of sugar beer 'unless it was rated at 300 per cent on the cost price', while a duty of 20s a hogshead on sugar beer would still leave the sugar brewer at the same price as the malt brewer, and with less risk of spoilage during brewing and with the sweeter taste demanded by the public. The only effective way to encourage all-malt brewing, concluded the *Monitor*, was to make it illegal to brew with sugar, as in England. The 'law of England *compels* the people of England by the severest laws, to drink malt liquor, or none at all. And the brewers being thus *forced* to brew from malt, take pains with their trade, and have learnt the art of brewing from malt'. And so,

you brewers of Sydney when *forced*, will also learn to brew good beer from malt in like manner. For which purpose you will not as you do now, brew in the sun, subject to every change of atmosphere, but, you will brew under ground – you will have your cellars under ground – you will brew also at the right season as they do in England, namely from April to August. You will put good sound fresh hops into your beer, and plenty of them, in lieu of old hops which have lost their strength and flavour; and thus, being *forced by law*, you will gradually *learn your trade*, of which you are at present grossly ignorant.

The criticism of the *Gazette*, the *Monitor*, Jamison and Ferraby is troubling. It is at odds with the praise of others. The *Gazette*'s position, in particular, was an about face from its previous enthusiasm for the industry, and Jamison had changed his tune considerably from his presidential address of April 1828, when he noted the benefits to the farmer of the breweries, which were annually increasing their consumption of grain and improving the quality of their

product.⁸⁴⁴ And the criticism is at odds with other information available from government figures and the brewers' advertising of their products. While one must allow for the enthusiastic language of advertising, it is hard to believe that the brewers could have got away with complete deception of their customers as to the nature of their products. Brewing practice is also revealed in advertisements for inputs.

The claim that the colonial beer was lightly hopped in 1831 had some truth to it, but was also unfair to some extent and very much a matter of taste. New South Wales imported 108,417 lbs of hops in 1828 and 91,062 lbs in 1829. These were high years. In 1831, only 6,608 lbs were imported, after which the figure rose again, reaching a record 176,972 lbs in 1834.⁸⁴⁵ The very low figure in 1831 does not mean hops all but disappeared from the brewer's kettle. Local brewers, as elsewhere, carried over large stocks of hops from one year to the next, which may explain the *Monitor's* injunction to local brewers to use fresh hops. Even with a carrying over of stock, the hopping rate probably did fall in 1831, due to the low level of hop imports and the increase in the output of beer. Local hop production does not affect this conclusion. If, say, 40,000 lbs of hops were carried over to 1831, and using the *Monitor's* estimate of average production of 300 hogsheads per week, the hopping rate would have been about three quarters of an ounce per gallon. This was lower than in 1821 and at the lower end of British commercial hopping rates, although a common enough rate in some regional styles such as brown ale. Even among the great porter brewers, hopping rates were falling by 1830 'as storage time diminished and taste moved towards mild beer'.⁸⁴⁶ The established local taste for sweeter, less hoppy beers was not unique to the colonists.

⁸⁴⁴SG, 7 April 1828.

⁸⁴⁵Blue Books, 1828–34, PRO, CO 206/69-74 (AJCP 1170).

⁸⁴⁶Mathias, *Brewing Industry*, p. 482.

The more substantial accusation that all colonial beer was made entirely from sugar seems to be wildly inaccurate. Advertisements by Payne, Buckton, Hughes, Archbold, Dickson and the unnamed Pitt Street brewer proclaim the use of barley malt, or seek the supply of barley. Other brewers used the old standby of maize, or wheat. The brief campaign around 1830 against all-sugar beer cannot be believed. Certainly, sugar was used as an adjunct, as it had been since the 1790s. Candor's figures suggest that many brewers put 80 lbs of sugar to a hogshead of beer which is considerably higher than Squire's practice of 10-12 lbs per hogshead, and more in line with Gregory Blaxland's advice of using sugar for a third of the mash. It is quite possible that brewers were using larger proportions of sugar in 1830 than in 1820, but grain provided the bulk of fermentables.

The claim that colonial beer was consumed within days of its manufacture is similarly exaggerated. No doubt, much of the local beer was made quickly and cheaply, but most brewers had a range which included a stronger, premium beer which would have had longer maturation. Dickson and Co.'s 'lively, brisk, pale Ale' 'in ripe state for delivery' suggests cask conditioning. And again, the point must be made that some well-established styles of English beer had limited maturation. The taste for unvattd beer – new, sweet mild among the working class, and light, bitter pale ale among the middle class – would sweep aside vattd strong ales and porter in Britain in the rest of the nineteenth century.⁸⁴⁷

The campaign against colonial beer around 1830 raises many questions. Had brewing practice worsened since 1820? Had it worsened, as the *Gazette* and Jamison imply, since 1828? Was sugar used in larger proportions than in 1820? Had more brewers attempted to use barley, but failed? Had the hopping rate fallen? The safest conclusion is that the changes in brewing practice were not as uniform or as great as the strident claims of the critics or the equally forthright claims of Candor might suggest. Colonial beer continued to be made with various grains and cane sugar, was somewhat lightly hopped, and was quickly fermented

⁸⁴⁷Wilson, 'Changing Taste'.

and conditioned. This was as it had been in 1820, and the simple defence of brewing practice in 1820 remained as relevant in 1830: it worked. The *Monitor* might jeer that the brewers should learn their trade, but they had, and they knew their business. Jamison could not see the inconsistency in applauding the success of colonial brewers in producing so much beer while urging a policy against the use of an ingredient which was a necessary part of that success. The *Monitor* was unwilling to point out that if brewing literally went underground, and was undertaken for only four months of the year, using barley only, the volume produced would necessarily fall and the price would rise. Its declaration that the people should have all-malt beer or nothing was impractical and illiberal. The choice was wider than beer or nothing: spirits were a substitute. And like all of the critics, the *Monitor* could not come to terms with the preferences of consumers. It is not just that colonial brewing practice made large-scale production of cheap beer possible; drinkers liked colonial ale. One can understand the critics' despair at the 'vitiated' tastes of the colonists, but to set aside the principles of 'certain free-trade theorists' is another thing entirely.

The attack on the quality of colonial beer in 1829-31, and the available evidence on the size and structure of the industry, show that brewing was not demonstrably transformed in the 1820s. Rather, it was in the 1830s that breweries would take a leap in size and sophistication. The Albion Brewery was advertising for 15,000 bushels of barley in 1835.⁸⁴⁸ At eight bushels a hogshead, this would make 101,250 gallons of strong ale and the same again of table beer. Even if this was the total grain purchase for the year it suggests that the Albion had moved well beyond the scale of Squire's brewery. The Kent Brewery, opposite Ultimo, advertised for the first time in the same year. Its proprietors, Charles Newnham and John Tooth, promised good ale and porter from malt and hops only.⁸⁴⁹ Tooth and the Kent Brewery are with us still, subsumed but not extinguished. But the

⁸⁴⁸*The Sydney Monitor*, 3 June 1835.

⁸⁴⁹*The Sydney Morning Herald*, 1 June 1835. See also *The Sydney Monitor*, 3 June 1835.

industry did not begin in earnest with Tooth's Kent Brewery in 1835, or with Hughes's Albion Brewery in 1828, or even with Cooper's Australian Brewery in 1824. The establishment of a permanent, successful, and remarkably modern industry had already been accomplished in 1821 by the first generation of brewers, most notably, Squire, Rushton and Lawrence.

When a beer drinker called for a pot in his favourite pub in 1821, he almost always received a beer produced by one of a small number of large, commercial brewers. A minority of drinkers would order higher priced foreign beer, usually at a more expensive establishment, or frequent one of the two or three pub breweries in New South Wales. The name of the brewery which made his favourite beer was probably known to the drinker, and possibly displayed. The publican may have been independent, especially if he held a general liquor licence, but in a number of cases, the public house was tied to a particular brewery. That brewery, while located in the main town, distributed widely to other settlements. The drinker might have ordered a full-strength strong ale or a lower strength table beer. Both were made from a mixture of grains, most obviously, maize; used sugar as an adjunct; were sweet and moderately hopped; and had been quickly fermented and matured. While drinking in public was popular, especially at the end of a working week, a large amount of beer was consumed off licensed premises. The drinker could take home a small quantity of beer, say, a quart or two, from the pub, or he could buy beer in bulk at a lower price per gallon. Local beer had the lion's share of total beer sales and also competed with wine and spirits. It was particularly popular in summer. While the drinker may have idly toyed with the idea of brewing his own beer, it was much easier to go to work, and pay for his beer, as he did for his meat and bread. The biggest drinkers of local beer were native-born white males in lower and middling income employment. Average consumption of 11 gallons per head was about half of consumption levels today, but was typical of consumption for Australia from about 1890 to 1945 when beer was undoubtedly the national alcoholic drink. All

of this took place in circumstances so different to those of 1890 or of our own time, and yet the fundamentals of the brewing industry and of beer drinking in 1821 are entirely familiar.

The Awful Importance of Brewing

‘What two ideas are more inseparable than Beer and Britannia? – what event more awfully important to an English colony, than the erection of its first brewhouse?’⁸⁵⁰ As one of the leading wits of his day, Sydney Smith was practised in the art of irony, but there was nothing ironic in his declaration of the central place of beer in the life and diet of the English people. From the first years of the colony’s establishment, considerable effort had gone into erecting brewhouses able to supply the normal English intake of beer. In 1821, there was still some way to go. Commercial production in New South Wales provided about 11 gallons of local beer per head compared with 20 gallons in England and Wales.⁸⁵¹ Home brewing, which was rare in New South Wales and widespread in England and Wales, made the beer gap wider still. And Australian brewers had departed significantly from British brewing practice and created their own style of ale. Nevertheless, there was a strong demand for the national drink, and great progress had been made by commercial brewers, under difficult circumstances, in meeting that demand.

Another Smith – Adam – would not have been surprised by the success of the local brewers. ‘It is not from the benevolence of the butcher, the brewer, or the baker, that we expect our dinner, but from their regard to their own interest.’⁸⁵² The demand for beer had attracted a number of businessmen, some of whom prospered. They invested thousands of pounds to build and expand their

⁸⁵⁰Smith, ‘Botany Bay’, in *Essays*, p. 387.

⁸⁵¹The figure for England and Wales is based on beer production and population figures in Mitchell and Deane, *Historical Statistics*, pp. 6, 252, and assumes an average barrel size of 34 gallons (see Appendix 2).

⁸⁵²*Wealth of Nations*, vol. I, p. 16.

breweries, achieving significant economies of scale; overcame problems in the supply of ingredients, including establishing the Australian hop industry; successfully experimented in production techniques which allowed them to cope with deficiencies in ingredients and the difficulties posed by the climate; and distributed widely to households and publicans, including establishing their own retail outlets. Brewing is a prime example of the industriousness and ingenuity which had transformed a struggling convict camp to a society of some accomplishment in a generation. A striking feature of brewing, as of the colony in general, was its modernity. Australia largely skipped home brewers and brewing victuallers and went quickly to relatively large and specialised common brewers, with all that that implies about location and distribution.

The history of brewing in early Australia is at odds with the conventional picture of a degenerate society drenched in, addicted to and debauched by rum. In such a society, beer drinking and brewing are incongruous. Who would buy beer? Who, therefore, would make beer? Who, indeed, would be capable of making beer? But average alcohol consumption was neither extraordinarily high compared with contemporary Britain or modern Australia nor dangerously high against modern health standards. And the establishment of a large, successful brewing industry by 1821 was not the work of an intemperate and incapable people.

Table 7.1: Average Monthly Production of Six Sydney Breweries in 1828

	hogsheads	gallons
Payne's Wellington Brewery	130	7,020
Wright's Australian Brewery	115	6,210
Buckton's Woolpack Brewery	100	5,400
Salter's New Brewery	60	3,240
Wilson's Gaslight Brewery	30	1,620
Middleton's Nelson Brewery	30	1,620
Total	465	25,110

Note

It is assumed that by 1828 all beer was sold in standard barrels of 36 gallons and hogsheads of 54 gallons (see Table A2.1).

Source

The Australian, 16 July 1828.

Appendix 1

The Process of Ale Brewing

Malting Barley or other grain is malted in a malthouse or maltings. The barley is steeped in water in a large cistern or steep of wood or stone (or lead, as in the case of the Parramatta Brewery). Several changes of water, or tides, may be made to clean the barley of dirt and wild yeasts. The now swollen grain is taken to the couching house where it is heaped in mounds (or couches) about 60 centimetres high. During couching, heat builds up and germination begins. The grain is then floored, or spread thinly to a depth of about 10 centimetres. During flooring the barley will be turned with shovels. A couching house may have several floors, with batches of barley at different stages of germination. At the right moment, which may be up to fourteen days after germination began, the barley is dried in a kiln to stop further germination. The maltster's simple test is to chew the green malt. If it is soft and crumbly, the green malt is ready for drying. An ale brewer then as now was keen to have as much of the protein turned into enzymes during germination. The kiln (or oast) is in a tall tapering tower characteristic of breweries. It has a furnace at the bottom, and a perforated or fine mesh floor above this. Heat is drawn through the malt by the draught created by the tower. When kilned, the green malt is cured so that the malt is stable and storable. The degree of kilning is greater for dark, roasted beers such as porter and stout. As heavily kilned malts have little fermentable sugar, they are used to impart flavour and colour in combination with less heavily kilned malts which provide the fermentable sugars.

Mashing Malting releases the starches that are converted into fermentable sugars during mashing. The grain is made up of a starchy endosperm and a tough outer layer that contains proteins which are converted into enzymes during germination. During mashing the enzymes act as catalysts to turn the starches into water-

soluble maltose and dextrin (saccharification). First, the malt is coarsely ground or cracked, to produce grist, and mixed with hot water (known as 'liquor') in a masher. The water is about 75°C but quickly cools when the grist is introduced. The porridge-like mash is then fed into the mash tun, a large, circular, open wooden vessel. Here, at say 65-68°C, saccharification occurs and the now soluble constituents of the malt dissolve in the liquor forming a sweet extract called 'wort' (pronounced wirt) or 'sweet wort'. Mashing is stopped by pumping more hot liquor into the tun to kill the enzymes. The wort is drawn off, in a simple tun by ladling, and in a more sophisticated tun by filtering through the spent grains and out through slots in the base of the tun. The wort flows into a trough or underback, where some clearing occurs before being pumped into the copper for brewing. The spent grains in the mash tun may be disposed of, usually to dairy and pig farmers as protein-rich feed, or used again in a second run to extract more wort. Second and subsequent runs are less malty and thinner, and would be mixed with a first run, or used to make small beer. In modern ale brewing unmalted adjuncts such as rice and maize may be added to the mash to deal with the problem of beer haze which appeared in the late nineteenth century with the development of improved barleys. These adjuncts add starches which contribute to the alcohol content but reduce the nitrogen level which causes beer haze. In ale brewing in the early nineteenth century unmalted adjuncts were uncommon, and in Australia, whatever grain was used, it was probably malted.

Brewing The clear wort is now boiled with hops in the brew kettle or copper. The hops give aroma and characteristic bitterness, as well as helping to preserve the beer by killing any bacteria in the wort. They also stop further saccharification by killing any remaining enzymes and coagulate proteins at the bottom of the copper. Some further hopping may occur during and at the end of brewing, the latter especially to impart further aroma. Sugar may also be added during the boil. As it has no starches that need to be converted by enzymes, sugar is not added to the

mash tun. If added in large quantities during boiling, the result will be a beer high in alcohol but thin bodied. The now hopped wort may be clarified with Irish Moss before being separated from the spent hops by being drained through the perforated base of the copper. The wort is then cooled in an open cistern to a temperature suitable for fermentation. Refrigerators, either in the form of pipes in the cistern through which cool water was passed, or a grille of pipes through which the wort was circulated and over which cool water was passed, were introduced in the early nineteenth century in Britain.

Fermentation Yeast is pitched into the wort in an open fermentation vessel. During fermentation enzymes in the yeast convert the sugar or 'saccharine matter' in the wort into alcohol and carbon dioxide. Yeast is skimmed off during fermentation to be re-used in the next brew and for sale to bakers. When yeast cells, overcome by alcohol, rise to the top, fermentation is near its end. In Britain, 'warm fermentation' took place at natural temperatures, but ideally between 15 and 20°C. Fermentation may take up to ten days, or as little as three. The temperature was often higher in early Australia and fermentation may have been very rapid.

Conditioning The green beer is now matured in conditioning tanks for anywhere from a few days up to a month. It is then put in closed barrels and cellared. Secondary fermentation was and remains a common practice, with a dose of sugar being added to build up natural carbonation. This requires venting of the casks to allow carbon dioxide to escape before the secondary fermentation is completed. Finings such as isinglass are also added to the cask to draw yeast cells to the bottom of the cask, thus further clarifying the beer.

Sources: Berry, *Beers and Stouts*; Jackson, *Beer*; Line, *Brewing*; Mathias, *Brewing Industry*; Protz, *Beer*.

Appendix 2

Weights, Measures and Currencies

acre 4,840 square yards (0.405 hectares). There are 640 acres to the square mile.

bag a measure of hops of 280 lbs or 2.5 hundredweight.

barrel 31.5 wine gallons; 36 ale gallons for beer; 32 ale gallons for ale in London; 34 ale gallons for ale in the country. Imported beer was mainly porter and so sold in 36 gallon barrels. Colonial beer was ale and sold in 32 gallon barrels until sometime in the 1820s (see Table A2.1: *Notes*).

bushel a measure of volume, equal to eight gallons, used for grain and malt. The weight of a bushel therefore varied. For grain, better quality land or a better season would produce a heavier bushel, while in malting, grain loses about a fifth of its weight. A 56 lb bushel of barley might become 42 lbs of malt. A selection of English malts at the time ranged from 27.5 lbs to 39.5 lbs per bushel, the higher weights belonging to the higher quality and more expensive pale malts (Mathias, *Brewing Industry*, pp. 414-5). Given the great use of maize in the colony, it should be noted that a bushel of maize means a bushel of kernels (that is, corn which is shelled or 'off the cob').

butt 126 wine gallons (equal to a pipe); 108 ale gallons for beer; 96 ale gallons for ale.

firkin 9 ale gallons for beer; 8 ale gallons for ale; 9 imperial gallons.

foot 12 inches (0.305 metres).

gallon the wine gallon was 231 cubic inches (3.785 litres) and the ale gallon was 282 cubic inches (4.621 litres). The imperial gallon, introduced in Britain in 1826, and into Australia in 1833, was 277.42 cubic inches (4.546 litres). A gallon holds eight pints.

gill a quarter of a pint. A noggin.

guinea 21 shillings.

hogshead (hhd) 63 wine gallons; 54 ale gallons for beer; 48 ale gallons for ale; 52.5 imperial gallons.

hundredweight (cwt) 112 lbs.

inch one-twelfth of a foot (25.4 millimetres).

kilderkin 18 ale gallons for beer; 16 ale gallons for ale; 18 imperial gallons.

mile 5,280 feet or 1,760 yards (1.609 kilometres).

ounce (oz) one sixteenth of a pound.

penny (d) British coin equal to one twelfth of a shilling or one two-hundred-and-fortieth of a pound. Plural: pence (for a sum of money); pennies (for a number of coins).

perch 5.5 yards. A square perch (sometimes called simply a perch) is 30.25 square yards. There are 160 square perches to the acre.

pint the wine pint was 28.875 cubic inches and the ale pint was 35.25 cubic inches. The imperial pint is 34.677 cubic inches (0.568 litres). There are eight pints to the gallon.

pipe 126 wine gallons (equal to a butt). Beer was sold in butts not pipes. An imperial pipe was 105 gallons.

pocket a cylindrical cloth sack about six feet high and two feet in diameter which was the standard measure of hops, weighing 168 lbs, or 1.5 hundredweight. There are thirteen and a third pockets to the ton.

pot a quart of beer.

pound (lb) a unit of weight, which in Britain from 1826, and in Australia from 1833, was equal to 16 ounces (0.454 kilograms). In practice, the pound continued to vary greatly for many years, depending on the place and the commodity. The pound ranged from 12 to 27 ounces.

pound (£ or l) a unit of currency, equal to 20 shillings or 240 pence.

puncheon 84 wine gallons; 72 ale gallons for beer; 64 ale gallons for ale.

quart two pints.

quarter (qtr) 8 bushels (= 32 pecks = 64 gallons = 256 quarts = 512 pints).

rod see perch.

shilling (s) British coin worth 12 pence or one-twentieth of a pound.

Spanish dollar 'the nearest approach to an international money and the currency of most British colonies' (S. J. Butlin, *Foundations of the Australian Monetary System 1788-1851*, Melbourne University Press, 1953, p. 14). The dollar was the most widely circulated foreign currency in the colony and usually exchanged for 5s, although its availability and exchange rate varied.

tierce a third of a pipe or butt; 42 wine gallons. Rarely used for beer or ale.

ton 20 hundredweight or 2,240 pounds.

tun 252 wine gallons; 216 ale gallons for beer; 192 ale gallons for ale.

yard 3 feet (0.914 metres).

Sources: James H. Murray (ed.), *A New English Dictionary on Historical Principles*, Oxford at the Clarendon Press, 1888; *Oxford English Dictionary*.

Table A2.1: Summary of Liquid Measures

Measure	Wine Gallons	Ale Gallons	Ale Gallons
	Spirits and Wine	Beer	Ale
Tun	252	216	192
Pipe or Butt	126	108	96
Puncheon	84	72	64
Hogshead	63	54	48
Tierce	42	*	*
Barrel	31.5	36	32
Kilderkin	*	18	16
Firkin	*	9	8

Notes

* not in general use

The exact conversion between ale and wine gallons is: 77 beer gallons = 94 wine gallons = 21,714 cubic inches.

The distinction between beer and ale measures appears to have lapsed in Australia sometime in the latter half of the 1820s, before the introduction of imperial measures in 1833. In 1828, The Albion Brewery advertised its 'malt beer' in kilderkins of 18 gallons, although this was probably an ale (SG, 19 November 1828). In 1831, the synopsis of weights and measures in the *Van Diemen's Land Almanack* (edited by Henry Melville, Colonial Times Newspaper Office, Hobart, 1831) distinguished between wine measures, and a single set of ale and beer measures which were based on a 36 gallon barrel. It reported that while the firkin of ale in London was once 8 gallons, it was now 9 gallons all over England, and the distinction between beer and ale had ceased to apply for all of the other measures.

Appendix 3

Glossary of Alcohol and Related Terms

adjuncts strictly speaking, grain starches such as rice and maize that are added to the mash tun to supplement the grist; more generally, the term also includes cane sugar added to the copper during brewing.

alcohol by volume the volume of pure alcohol divided by the volume of liquid. Alcohol by weight measures the weight of the alcohol divided by the total weight of the liquid. As alcohol weighs less than water, alcohol by weight for a bottle of spirits, wine or beer will be less than alcohol by volume. Alcohol by volume is the most common measure of alcoholic strength in use today. See also Sikes Proof.

ale a beer made with warm fermentation ale yeasts, as opposed to a lager made with cold fermentation lager yeasts. A common definition of ale is that it uses top-fermenting yeast. This is a bit misleading, as the yeast works at all levels of the wort, converting sugars into alcohol. Ale yeast, however, rises to the top of the fermentation vessel at the conclusion of fermentation, while lager yeast settles to the bottom. Based on these technical distinctions, ale includes various pale ales, milds, porters, stouts and wheat beers. Ale is also used to mean a lighter-coloured, perhaps coppery or pale yellow, warm fermenting beer, in contrast to darker beers such as porter or stout. This was how the term was used in early Australia and contemporary England, where all beer was warm fermenting, and it is how the term is used in this thesis except where discussion turns to a comparison between ale brewing and lager brewing. See also beer.

arrack (also arak) a spirit made from rice or coco sap or grapes or dates or, indeed, just about anything. Used generically for cheap spirits.

attenuation the fall in specific gravity as heavier sugars are converted to lighter alcohol during fermentation. The greater the degree of attenuation, the more alcoholic, lighter in weight and thinner in body the beer becomes. See also body, gravity, and length.

beer any alcoholic yeast-fermented malt drink. Today, an Australian would call a lager or an ale 'beer'. An American, according to Michael Jackson, might distinguish a lager-style beer from an ale, and an Englishman might still think of beer and ale as synonymous, and in distinction to a lager. An Australian will sometimes add to the confusion by happily using ale as a generic term, a 'cleansing ale' usually being a lager. Beer may be divided into two broad types: cold fermented lagers (including beers known as pilseners) and warm fermented ale (including porters, stouts and wheat beers). The confusion over terms is not new, even though all British beer was top fermented until late in the nineteenth century. Until well into the seventeenth century, an Englishman would have distinguished an unhopped ale from the hopped beer introduced into England in the fifteenth century. All malt liquor became hopped but ale and beer continued in use. Broadly beer was a term used in the towns, while ale remained the term in use in the country. At the time of English settlement in Australia, the distinction was usually between beer as a term for porter, and ale, although in the British countryside especially, strong beer meant an ale not a porter. Ale was sold within two to four weeks of being brewed, and was light in colour, compared to porter which was stored for several months and dark. Generally speaking, country brewers tended to produce ale and the great London breweries produced porter. Further confusion arose from the fact that in London, ale barrels were 32 gallons in size, and beer barrels were 36 gallons. In the country, that is, beyond the Bills of Mortality, the barrel was 34 gallons for all malt liquor. The distinction in London was maintained through the range of containers: hogsheads were 48 and 54 gallons for ale and beer respectively; butts were 96 and 108 gallons; tuns were 192 and 216 gallons (see Table A2.1).

beer haze persistent cloudiness in beer which became a problem in the late nineteenth century with the development of higher quality, more nitrogenous barley. It was chiefly dealt with by the use of adjuncts.

beer shop in Britain, licensed premises for the sale of beer only, established by the Beer Act of 1830. Also called a beer house or, colloquially, a Tom and Jerry. In this thesis, the term is also applied to the beer only licences introduced by Governor Macquarie in 1810.

body the level of sugars in a beer. A full bodied beer has a higher level of sugars, and weighs more. If fermentation is more complete, the alcohol content is higher and the beer has less body.

brewing the whole process of making beer; or the part of the process between malting and conditioning; or the particular part of the process in which the wort is boiled and hops and sugar are added, sometimes known as boiling.

brewing victualler a licensed victualler who brewed on his own premises for sale over the bar. A pub brewer.

brewers' grains see spent grains.

cider an alcoholic drink made from fermented apple-juice; in early Australia, usually made from peaches and called peach cider.

commercial brewer in Britain, often used to mean a common brewer, that is, excluding private brewers and brewing victuallers. In this thesis, the term simply means brewers who produced beer for sale, as opposed to private brewers.

common brewer a brewer supplying beer in large quantities to retailers and private customers, as opposed to a brewing victualler who sold in small quantities from his own licensed premises. In Britain, a common brewer could only retail from his own tap room and sell wholesale by the cask. In Australia, common brewers could sell wholesale in quantities as small as four gallons, but it seems that they could not sell from their own tap room without a retail licence.

corn the commonest grain, so wheat in England and oats in Scotland. In Australia, as in America, it meant Indian corn or maize. Also used for grain in general.

decoction method the mashing method used in making lager, in which the starting temperature of about 38°C is raised in stages by removing a portion of the

mash to a cooker and then returning it to the main mash. This gelatinises starches and results in their very thorough conversion to sugars. Decoction also involves a 'protein rest', at a low temperature, that breaks down the large amount of proteins found in highly nitrogenous malts. Both the conversion of starches and the reduction in proteins helps to clarify the beer. See also infusion method.

density see gravity.

fining clarifying beer by removing suspended yeast. Usually this is done by introducing finings such as gelatin or isinglass a couple of days before bottling or casking the beer. Gelatin is made from boiling collagen, the protein found in the connective tissue of animals. Isinglass is a kind of gelatin extracted from the swimming bladder of the sturgeon.

Geneva gin. A corruption of genever, the Dutch for juniper.

gin 'liquid Madness', according to Carlyle. A seventeenth century Dutch invention of distilled fermented barley flavoured with juniper berries.

Subsequently flavoured with various additives, including angelica, anise, cassia bark and liquorice.

gravity used in this thesis as shorthand for original specific gravity: a measure of the weight of the wort before fermentation begins. Specific gravity is the ratio of the weight of a solution to an equal volume of water. 'Original' refers to the fact that the reading is taken before fermentation begins. The wort is a solution of malt sugar in water. Sugar weighs more than water, therefore if water is assigned a figure of 1000, the wort has an original specific gravity greater than 1000. The significance of gravity is that it shows the potential alcohol content of the beer. The relationship between gravity and alcohol content is affected by the degree of attenuation, that is, the thoroughness of the conversion of sugar to alcohol.

hard water water which is rich in mineral salts, in particular, calcium sulphate (best known in its hydrated form: gypsum) and magnesium sulphate (best known in a prepared form: Epsom salts). These aid the conversion of starches during mashing and of sugars during fermentation. Hard water was a particular boon to

the pale ale brewers, and was a notable feature of the success of Burton upon Trent and Edinburgh as brewing centres.

Hollands gin.

husked corn corn on the cob, but with the leaves and beard taken off; shucked.

For example: 'gathering, Husking, and shelling corn' (HRA V, p. 664). Compare shelled.

infusion method the mashing method used in making ale, in which the grist is added to hot water and kept at a constant temperature. The 'strike heat' of the liquor is about 75°C which cools to a mashing temperature of 65°C when it hits the grist. See also decoction method. Prost, *Beer*, pp. 18-23, has good descriptions of both infusion and decoction methods.

isinglass see fining.

keeping beer a beer made for storage and maturation, as opposed to a running beer made for immediate consumption.

length the volume of beer derived from a given quantity of malt, usually expressed as barrels per quarter. It is a measure related to gravity.

licensed victualler in Britain and Australia, someone licensed to sell alcoholic liquor by his local Bench of Magistrates, variously called a publican or innkeeper.

liquor for brewers, water for use in brewing; for drinkers, alcoholic drinks of all kinds.

malt barley or other grain that is steeped, germinated and dried. There were three types of brewers' malt in use in Britain in the early nineteenth century: pale, amber and brown. Pale was the strongest and most expensive.

mild originally, simply a less-hopped beer, which developed into a recognisable style in the early nineteenth century: a lower-gravity, quickly matured, full-bodied, sweeter, less hoppy, usually dark brown ale.

pale ale well-hopped, copper-coloured, unvattd ale particularly associated with Burton upon Trent, which, with mild, began replacing strong ale and porter as the most popular beer-styles in England from about 1830.

perry an alcoholic drink made from fermented pear-juice.

porter a dark, highly hopped, vatted beer made in vast quantities by the great London breweries. Because of its thorough fermentation and lengthy maturation, porter was highly attenuated and 'vinous'. See also stout.

poteen (or potheen; pron. potcheen) an Irish word for illicitly made spirits, often from potatoes, but used generically.

proof the standard of strength of alcoholic liquors. See Sikes Proof.

rum specifically, spirit distilled from sugar cane residue or molasses. Generically, any spirit, with the suggestion of poor quality and high alcohol content.

running beer a beer made for immediate consumption, as opposed to a keeping beer.

secondary fermentation following primary fermentation in the fermentation vessel. When green beer is put into barrels or bottles (racking), a dose of sugar may be added to induce a secondary fermentation, which aids natural carbonation.

shelled corn off the cob. For example, 'any Quantity of excellent Maize, shelled or in cob' (SG, 13 January 1805). Compare husked.

Sikes Proof standard of strength of alcoholic liquors in use in England from the late 1810s. Also known as British Proof and London Hydrometer Proof. Sikes proof (100°) was 57.1 per cent alcohol by volume. Sikes's instrument was chosen by the Board of Excise in Britain in 1803, although this decision was subject to considerable delays and not confirmed until 1818 (Mathias, *Brewing Industry*, p. 69).

small beer a weak beer, usually produced from a second or third mash of spent grains. In the late eighteenth century, British Customs and Excise duties distinguished between small and table beer, according to the costs of malt and hops used in production. Small beer had a duty of 1s 4d per barrel, table beer of 3s, and strong beer and ale of 8s in 1787. By 1802 small and table beer were collapsed into a single duty of 2s and the two terms became synonymous. In 1823 a class of intermediate beer was created with a duty of 5s (Mathias, *Brewing*

Industry, pp. 241, 369). In Australia, where there were no excise duties on beer, small beer simply meant a weaker beer, and might broadly be thought of as a light or 'mid-strength' beer. Small beer was made by both porter and ale brewers.

soft water water with low mineral salt content. London's well-water was notably soft and was best suited to producing porter and mild.

spent grains the remains of the malt after the wort has been drawn off at the conclusion of mashing. Usually used for a second and even a third mash, but eventually disposed of to farmers as a source of protein for pigs and cattle.

spruce beer an anti-scorbutic commonly brewed by sailors on board ship or on shore from malt or malt essence.

strong ale superior ale with high gravity and high alcohol content, vatted for several months and sometimes more than a year

strong beer a synonym for strong ale and/or porter.

stout a dark beer brewed with roasted malt or barley. Before the rise of porter the term was applied to the strongest beer in a brewer's range and meant a strong ale. For porter brewers, the strongest beer was porter stout, a 'stouter kind of porter', and this was the well-established meaning in 1788.

table beer from 1782, an intermediate beer between small and strong beer. The term became synonymous with small beer (see above).

Tom and Jerry a beer shop.

vatted beer strong ale and porter matured in vats for up to a year or more.

wort a sweet solution of water and malt sugars obtained during mashing.

Bibliography

This bibliography is divided into unpublished and published material.

Unpublished material is only available in original manuscripts, photocopies or microform at specific locations. As well as archival records, it includes modern theses and other manuscripts, transcriptions and some government reports such as the Blue Books even though these were sometimes printed. This material is at seven locations:

Archives Office of New South Wales, Sydney;
Mitchell Library, Sydney;
New South Wales Land Titles Office, Sydney;
Archives Office of Tasmania, Hobart;
National Library of Australia, Canberra;
Australian National University, Canberra; and,
Public Record Office, London.

This book was written in Australia and so only the material from the Public Record Office which is available through the Australian Joint Copying Project has been used.

Published material includes all publications, no matter how rare, and is divided into the following categories:

Published Records;
British Parliamentary Papers;
Australian Government Publications;
Dictionaries and Encyclopaedia;
Contemporary Newspapers and Almanacs;
Contemporary Books, Pamphlets and Articles;
Books and Pamphlets Since 1840; and,
Book Chapters and Articles Since 1840.

Unpublished Material

Archives Office of New South Wales, Sydney

The Archives Office of New South Wales (AONSW), in Nurses Walk, The Rocks, is a vast repository of historical documents.

The chief source of information in the AONSW about brewing is the collection of Papers of the Colonial Secretary (Col. Sec.). This position was called the Secretary to the Governor or Secretary to the Colony until Frederick Goulburn's appointment as the first Colonial Secretary on 1 February 1821. Whatever the title, the office of the Colonial Secretary was the centre of the bureaucracy in the new colony. Through the office passed the larger part of the daily operation of the civil administration of the colony. The Index to the Papers of the New South Wales Colonial Secretary 1788-1825 is in 21 volumes or on 63 microfiches and is accompanied by a one volume handbook (AONSW, No. 30, 1989). The Index and Handbook are available in some major libraries. There are yearly indexes from 1826 onwards.

The Handbook has a summary list of material, arranged by the location of the original documents; a summary list of papers on microfilm and microfiche; and a list of subject headings used in the index. It also provides a history of the office of Colonial Secretary and describes some features of the Col. Sec. Papers, such as the destruction of a number of records by Governor Bligh at the time of the officers' revolt (p. 19) and the fact that personal relations between the Governor and Colonial Secretary, on the one hand, and prominent people, on the

other, might mean that some very important matters were dealt with informally without paperwork (p. 24).

The Col. Sec. collection for 1788-1825 is contained in 72 microfilm reels (reels 6001-6072) and 312 microfiches (fiches 3001-3312) plus a further 63 fiches for the Index. The chief elements of this collection are:

Letters Sent 1808-1825 (reels 6001-6019). These are often cited as Colonial Secretary Letter Books (CSLB);

Letters Received 1788-1825 (reels 6041-6069 and 6071-6072). These are often cited as Colonial Secretary Main Series of Letters Received or Col. Sec. In-Letters (CSIL);

Special Bundles and other records (reels 6020-40 and 6070 and fiches 3260-3312);

Memorials 1810-25 (fiches 3001-3162);

Petitions (fiches 3163-3253); and,

Memorials 1822-25 (fiches 3254-3259).

Readers may also find useful A Summary of Colonial Records in the Colonial Secretary's Office 1788-1826, compiled in 1888-9 when the Colonial Secretary's Office rearranged its records. This has been copied on Reel 6036; the original reference is 5/2331. A second body of documents in the AONSW is from a range of legal offices, of which the records of the Bench of Magistrates are particularly useful for licensing information.

Referring to AONSW material can create some confusion. The original (box) number for a particular item is in a form such as x701, SZ765 or 5/1047. Most material is on microfilm, designated by a four digit number, or microfiche, designated by F followed by a four digit number. Some material is on both film and fiche, and some frequently used material is also in bound photocopies, designated by COD. The bicentenary 6000 series of microfilms copied material available on lower numbered microfilms. So 6023 contains reels 2665 and 2666.

A document usually has a pencilled page number in the top right hand corner. Sometimes, there will be two such numbers from two different cataloguing systems. There is usually, though not always, a microfilm number. References to AONSW material are in the following form: title or description of the document; AONSW; series name and original box number; original pencilled page number; and, where it would be of assistance to the researcher, and especially where the original pencilled page number is not clear, a reel, fiche or photocopy number, and the page number of this copy (in parentheses).

For example:

Account of Beer Brewed at Parramatta between the 10th December 1804 and 30th June 1805, AONSW, Col. Sec. 4/1719, p. 209 (6041, p. 241).

Memorial of John Jones to the Commandant of Windsor, 13 April 1822, AONSW, Col. Sec. 4/1830 No. 199 (F3048).

Squire's trial of 19 August 1791, Minutes of Proceedings, AONSW, Bench of Magistrates, Sydney SZ765 (COD 17, p. 314).

Mitchell Library, Sydney

The Mitchell and Dixson Libraries are located within the State Library of New South Wales, Sydney. They house a large collection of documents, pictures and maps concerning the history of New South Wales. Mitchell Library (ML) holdings are catalogued in a number of ways, including MSS; Doc; one of the letters A to D; or Safe. Each form will be followed by a number, such as MSS 681/5 (meaning 681, volume or box 5); Doc 1450; A78-3 (meaning A78, part 3);

or Safe 1/74. In some cases the code from the relevant series index is given. Thus (4-117B) is a reference to entry 4-117 in series B. Microfilm copies are shown, for example, as CY 699 or FM 1747.

Material is referred to by title of the document; perhaps the name of the series of papers; ML; the original manuscript code, and page number where appropriate; and, in parentheses, the copy code, and page number where appropriate. Some microfilm copies are of documents not held in ML; these are referred to by an FM code only. Having an original code does not necessarily mean that the original document is in the ML; it may be a photocopy of an original document held elsewhere. The page references given in this book are usually to the archivist's pencilled pagination, although some material is referred to by the microfilm page number where the pencilled numbering is unclear or there are two sets of pencilled pagination.

Bonwick Transcripts

The Bonwick Transcripts (BT) in the Mitchell Library are used here for material from the Bigge Commission of Inquiry which is not available in John Ritchie's two volumes of evidence (see published material). The microfilm copies of the BT warn that because of mistakes and omissions, it is best to use HRNSW, HRA or PRO, CO 201/118-142 (in AJCP). On the other hand the BT are so widely referred to that it would be inconvenient to break with tradition. All references to the BT have been checked against other sources. Page references are to the original BT pagination and not to the microfilm page number. Papers relating to Scotch Martyrs (BT 38); Return of Grants of Land 1792-95 (BT 88); and Biography (A2000-4 BT); have also been used.

New South Wales Land Titles Office, Sydney

The transfer of land title was very informal in the 1790s, leading to disputes which often ended in the Civil Court. Governor King established the first public record of land transfers in 1800. These rudimentary accounts were kept at the major settlements of Sydney, Parramatta and the Hawkesbury, and were signed each week by the chief magistrate of each settlement. In 1802, King made the Judge Advocate's Office responsible for recording property assignments. Many landowners chose not to register property transfers with the Judge Advocate; on the other hand, a number of business transaction unconnected with real estate were entered in the Register for want of any other legal facility. Governor Macquarie reformed the system in 1817 into the first recognisable register of deeds in the colony. In 1825, the Deeds Registration Act made the Supreme Court responsible for registration of deeds and conveyances, following the abolition of the Office of Judge Advocate (see Robert Crundwell, Hilary Golder and Robert Wood, *From Parchments to Passwords: A History of the Land Titles Office of New South Wales*, Hale & Iremonger, Sydney, 1995, chapter 1).

The Register of Assignments to December 1825, Books 1-9, is in 7 volumes and covers from 1802 to 1825. Known as the Old Register, this invaluable source is held on the third floor of the Land Titles Office, Sydney (LTO). An Index to these registers is in the Basement (and in ML, A3620). Also in the basement is the Grants of Land Register which commences with Vol. 1, 1792-4. Vol. 1A covers 1794-96; Vol. 2 is for 15 October 1795 to 1 January 1800; etc. These are typewritten copies of AONSW, SZ47, SZ75 and SZ76 (see Ryan, *Grants*).

Torrens Title has been in use since 1863 and a search of all available material was made when title was transferred from the old to new system. For example, Primary Application 18710 provides information on Squire's land at Kissing Point. Detailed maps are available on the second floor of the LTO.

References to the Old Registers are in the form: description of transaction, date, Register of Assignments, Book no., page no., entry no., LTO.

Archives Office of Tasmania, Hobart

Very few records survive of the settlement of Tasmania to 1820. For the period to June 1812, the most convenient source is HRA ser. III, vol. I. Australian Bureau of Statistics, *Colonial Statistics 1804-1901*, in microform, has Van Diemen's Land Blue Books from 1822 onwards (with 1829 and 1830 missing); Statistical Returns for 1824 to 1839; and Statistical Tables for 1804 to 1823. These are largely handwritten, although the Blue Book was printed in 1828.

The Archives Office of Tasmania (AOT) has similar organisation to the Archives Office of New South Wales, but suffers from considerable gaps. The Colonial Secretary's Office correspondence is available for 1824 to 1836. The chief holdings are in CSO 1 (916 volumes). CSO 2 is the register of correspondence. CSO 3 is an index compiled at the time. A range of other material is available, including the Blue Books (CSO 50) and Government Orders and Notices (CSO 55).

The Blue Books for 1822 to 1831 (excluding 1829-30) are available at CSO 50/1 to CSO 50/6; Statistical Returns for 1824 to 1839, and Statistical Tables for 1804 to 1823, are in bound volumes.

The records of the Customs Department (TA 61) provide some information on the movement of spirits, in particular, Naval Officer Records of Bonded Spirits and Their Subsequent Issue, 10 November 1820 – 20 December 1827 (CUS 19/1) and Naval Officer Records for June 1829 – 1841 (CUS 19/2).

National Library of Australia, Canberra

The National Library of Australia (NLA) is a major repository of books and journals on Australian history. Many of these are available for use in the Main Reading Room but a number of rarer works are made available in the Petherick Reading Room. Both are located on the ground floor. The NLA is particularly useful for such material as the New South Wales Almanacks. On lower ground floor 1 is the Newspaper/Microcopy Reading Room which has a good collection of early colonial newspapers on microfilm. The Manuscripts Room is on the second floor.

Manuscripts Room

Anon. Carlton and United Breweries, a history. c. 1956. MS 500.

Lavett, J. K. *The Kissing Point Squires: Pages from the History of a Nation. The Story of James Squire and Frederick Garling*. Adelaide 1965. MS 1251.

Petherick Reading Room

Aitkins, Richard. *Voyage to Botany Bay (Journal 1787-1810)*. Transcript copy. FRM NK 1523.

Library of the Australian National University, Canberra

Philip, Ian. *The Development of Brewing and Beer Drinking in New South Wales in the Nineteenth Century*. Unpublished Honours thesis, Department of History, School of General Studies, Australian National University, 1979.

Walsh, G.P. *A History of Manufacturing in Sydney 1788-1850*. Unpublished Master of Arts thesis, Australian National University, 1969.

Public Record Office, London

The Public Record Office, London (PRO), contains a vast amount of British legal records, state papers and departmental records. Of chief interest here are the records of the Colonial Office (CO). These are grouped by colony and contain two broad classes of material: Original Correspondence from Governors, public offices in Britain, and individuals and private organisations; and various formal documents including sessional papers, gazettes, public service lists, blue books and other statistics. A very useful guide to the Public Record Office holdings is in Phyllis Mander-Jones (ed.), *Manuscripts in the British Isles Relating to Australia, New Zealand, and the Pacific*.

Significant parts of the Colonial Office records relating to early Australia, including most of the despatches to and from the Governors of New South Wales, are available in *Historical Records of Australia* and *Historical Records of New South Wales*. Selections of the Bigge Commission's evidence are in John Ritchie's two volumes; HRA ser. III, vols III-IV; HRA ser. IV, vol. I; and the Bonwick Transcripts at the Mitchell Library. Statistical Returns for New South Wales and the Blue Books for Van Diemen's Land have been issued by the Australian Bureau of Statistics as *Colonial Statistics 1804-1901* on microfiche or film.

Nevertheless, there is much from the Colonial Office records and from the Public Record Office in general which is not available in these sources. Much of the material in the Public Record Office has been made available in Australia though the Australian Joint Copying Project (AJCP), which is available in the NLA. A handbook to the AJCP is available in a number of major libraries.

The Original Correspondence for New South Wales is in CO 201. The Blue Books for New South Wales for 1822 onwards are found in CO 206/63 onwards. References to PRO material are in the following form: description of collection and year where available; PRO; CO and reference number; page or document number; and, in parentheses, the AJCP microfilm number. For example:

Secretary of State Correspondence, 1793, PRO, CO 210/8, p. 32 (AJCP 4).

Return of Spirits Imported into Sydney for 1811-20, Appendix to Commissioner Bigge's Report, PRO, CO 201/129, Document K17 (AJCP 117).

Published Material

Published Records

Historical Records of Australia. Series I, Governors' Despatches to and from England (26 vols); Series III, Despatches and Papers Relating to the Settlement of the States (6 vols); Series IV, Legal Papers (1 vol.). Frederick Watson (ed.). Library Committee of the Commonwealth Parliament, 1914-25.

Historical Records of New South Wales (Vol. I, Part 1 to Vol. VII). F. M. Bladen (ed.), except Vol. I, Part 2, edited by Alexander Britton. New South Wales Parliament, Sydney, 1892-1901.

HRA is preferred to HRNSW which has some 'grave errors' (HRA I, p. x). Generally, though, HRNSW is a useful, readily available source book and contains a wider range of documents than HRA. In particular, it is used for Government and General Orders from 1805 onwards, as these are usually not in HRA after 1804. HRA and HRNSW are referred to rather than the archival source except where there is a mistake in transcription from the original document.

British Parliamentary Papers

British Parliamentary Papers are listed under 'House of Commons', with the exception of the Bigge reports which are listed under the name of their author, John Thomas Bigge. The bibliographic details for Parliamentary Papers show the year of publication, the number of the paper (in parentheses), the volume number for that year, and the page on which the report begins (using the pagination assigned at the time of binding the papers, not the pagination of the original report). Details of conveniently available facsimile copies have been given where possible. The bound sets of the House of Commons Parliamentary Papers for 1801-1921 have also been reproduced on microfiche by Chadwyck-Healey Microform Publishing Service. For Statistical Registers (Blue Books) see Unpublished Material: Public Record Office and Archives Office of Tasmania.

Bigge, John Thomas. *Report of the Commissioner of Inquiry into the State of the Colony of New South Wales*. Parliamentary Papers, 1822 (448), Vol. XX, p. 539. Reproduced in *Australiana Facsimile Editions*, No. 68, Library Board of South Australia, Adelaide, 1966.

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House of Commons. *Copies of the Laws and Ordinances Passed by the Governor and Council of the Colony of New South Wales 1826*. Parliamentary Papers, 1828 (335), vol. XXI, p. 341. Reprinted in *Colonies Australia 3* (Irish University Press Series of British Parliamentary Papers), Irish University Press, Shannon, 1970.

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House of Commons. *Second Report (Relative to the Silk and Wine Trade) from the Select Committee of the House of Lords, appointed to inquire into the Means of extending and securing the Foreign Trade of the Country*. Parliamentary Papers, 1821 (703), Vol. VII, p. 420. Reprinted in *Industrial Revolution Trade 3* (Irish University Press Series of British Parliamentary Papers), Irish University Press, Shannon, 1968.

Australian Government Publications

Australian Bureau of Statistics. *Colonial Statistics 1804-1901*, microfilm. See Unpublished Material: Archives Office of Tasmania; Public Record Office.

Australian Bureau of Statistics. *Year Book Australia 1994* (No. 76). Australian Bureau of Statistics, Canberra, 1994.

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Dictionaries and Encyclopaedia

Australian Dictionary of Biography (Vols I and II, 1788-1850). D. Pike (ed). Melbourne University Press, 1966 and 1967.

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Contemporary Newspapers and Almanacs

The Sydney Gazette and New South Wales Advertiser

Australia's first newspaper began on 5 March 1803 and ceased on 20 October 1842. Publication was suspended between the issues of 19 April 1807 and 7 June 1807, and between the issues of 30 August 1807 and 15 May 1808. As well as serving as a newspaper and advertiser, the *Gazette* was, as the name implies, an organ of official policy. According to the headnote, government orders that appeared in it were 'deemed to convey official and sufficient Notifications, in the same Manner as if they were particularly specified to any one Individual'. The *Gazette* is available on microfilm at several Australian libraries (including NLA, mfm NX35). A facsimile reproduction of volumes 1-7 has been published (Trustees of the Public Library of New South Wales, and Angus and Robertson; Sydney; 1963, 1965, 1968 and 1969).

The Australian

The first private newspaper in New South Wales began in 1824 and is available at NLA (mfm NX 152).

The Monitor

The Monitor began in 1826 and became *The Sydney Monitor* in 1828. It is available at NLA (mfm NX 144).

The Sydney Morning Herald

Australia's longest running newspaper began in 1831 and is available at NLA (mfm NX 15).

The Hobart Town Gazette and Southern Reporter* later *The Colonial Times

The first *Hobart Town Gazette* began in 1816, and was operated by Andrew Bell until 1825 when it became *The Colonial Times*, after a rival paper also called the *Hobart Town Gazette* was established. The issues for 1816-19 are available in facsimile (Two vols, Platypus Publications, Hobart, 1965).

Almanacs

The editor of *The Sydney Gazette*, George Howe, also produced the *New South Wales Pocket Almanack* (1806 and 1808-21 are available at NLA). A number of almanacs produced in Tasmania from the mid-1820s are available in the Allport Collection of the State Library of Tasmania, including *The Tasmanian Almanack*, edited by the Government Printer, Andrew Bent, and *The Van Diemen's Land Almanack*, edited by Henry Melville of *The Colonial Times*.

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Book Chapters and Articles Since 1840

The following journals have had name changes:

Australian Historical Studies was formerly *Historical Studies* and before that *Historical Studies Australia and New Zealand*;
Journal of the Royal Australian Historical Society was formerly *Journal and Proceedings of the Royal Australian Historical Society* and before that *Journal and Proceedings of the Australian Historical Society*; and,
Australian Economic History Review was formerly *Business Archives and History* and before that *Bulletin of the Business Archives Council of Australia*.

The State Library of Victoria has a broken series of the very rare journal: *The Australian Cordial-Maker*, which contains W. H. Huntington, 'History of the Beer and Cordial Industry of Australia', in vols 14-16, 1903-1905. This useful series of short articles is in at least 19 parts, of which numbers 2 (February 1903) and 10-19 (January, February, April, June-September, November 1904; January and May 1905) are in the State Library of Victoria (ref. no. Y AF 663.6 AU7). Numbers 1, 2 (in part), 4, 5 and 10 may be found in John Webster, Notes on Early Australian and Tasmanian Breweries, ML, B1111, pp. 86-97.

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